No. 408.

IN THE

UNITED STATES CIRCUIT COURT OF APPEALS

FOR THE NINTH CIRCUIT.

JOHN H. WISE, as Collector of the Port of San Francisco, State of California,
Appellant,

vs.

SOUTHERN PACIFIC COMPANY, Importer of Certain Creosote, Merchandise, etc.,
Appellee.

TRANSCRIPT OF RECORD.

Upon Appeal from the Circuit Court of the United States, of the Ninth Judicial Circuit, in and for the Northern District of California.

INDEX.

In the Circuit Court of the United States, Ninth Circuit, Northern District of California.

In the Matter of the Application of the SOUTHERN PACIFIC COMPANY, for Review of Decision of United States General Appraisers, Relative to Classification of Certain "Creosote" Merchandise Imported by said Southern Pacific Company.

Petition of the Southern Pacific Co. for a Review, etc.

To the Honorable, the Circuit Court of the United States, Ninth Circuit, in and for the Northern District of California.

The petition and application of the Southern Pacific Company respectfully shows:

That your petitioner is, and at the several times hereinafter mentioned was, a corporation duly organized and existing under the laws of the State of Kentucky.

That on or about the 19th day of March, A. D. 1895, the said Southern Pacific Company imported into the United States, to-wit, at the Port of San Francisco, in said State of California, from London, a port or place in the Kingdom of Great Britain, certain merchandise invoiced as 2,200 casks liquid creosote." Said merchandise is more fully described as the merchandise subject

to consumption entry number 3652, dated March 19, 1895, of the official serial numbers of said Customhouse, at said Port of San Francisco, and subject to decision number 27026 B-3893 of the official serial numbers of the Board of United States General Appraisers on duty at New York, State of New York.

That on the 5th day of April, A. D. 1895, upon the entry of the said merchandise, the Collector of said Port of San Francisco classified the said merchandise for duty as "Distilled Oil," dutiable at the rate of 25 per cent ad valorem, under the act of Congress of August 27, 1894, entitled "An Act to reduce taxation, to provide revenue of the Government and for other purposes."

That thereafter, to-wit, on the 5th day of April, A. D. 1895, said entry was liquidated by said Collector, upon the classification and at the rate of duty hereinbefore set forth; and said duty upon said merchandise, amounting to the sum of $1,472, was ascertained, levied, and collected by said Collector, and the full amount thereof, together with all charges ascertained to be due upon said merchandise, was paid by said Southern Pacific Company on the 13th day of April, A. D. 1895.

That within ten days after such ascertainment, liquidation, and payment of said duties, to-wit, on the 13th day of April, A. D. 1895, the said Southern Pacific Company being dissatisfied with said classification, ascertainment, and liquidation, and the decision of the said Collector in the premises, gave notice to the said Collector in writing of such dissatisfaction, which written notice distinctly and specifically set forth the reasons for the objections of said importers thereto, as follows:

"That the article in question is not a distilled oil, but is, at ordinary temperature, a solid, waxy crystal, the chief contituents of which are naphthalene, tar acids and

pitch, and as such should be admitted free of duty under paragraph 443 of act of August 28, 1894, as product of coal tar specially provided for."

That thereafter, in due and proper time, said Collector transmitted all the papers and exhibits on which said entry was made, or connected therewith, to the Board of the United States General Appraisers, then on duty at the Port of New York, State of New York, United States of America; and thereafter, on the 27th day of July, 1896, said Board of United States General Appraisers, to-wit, H. M. Somerville, Charles H. Ham, and George C. Tichenor, made and rendered their decision in said matter in favor of the said classification, ascertainment, and decision made and rendered and duty levied and exacted as aforesaid, and against said protest.

And your petitioner avers that it is dissatisfied with the said assessment of said Collector, and is dissatisfied with said decision of said Board of General Appraisers as to the construction of the law respecting the classification of the said creosote and the duty imposed thereon.

Wherefore, your petitioner now applies to this Honorable Court for a review of the questions of law and fact involved in said decision of said Board of General Appraisers.

And in respect to said entry and the said payment, your petitioner specifies as the reasons for his objections thereto, as follows, to-wit:

That the said Collector erred in making said assessment, and said Board of General Appraisers erred in sustaining said assessment to the amount set forth in this petition with respect to said entry, and erred in finding as a fact that the merchandise in question was and is a distilled oil, and erred in finding that oils were and are its chief constituents, and erred in not finding that tar

acids, naphthalene, and pitch were and are the chief constituents of said merchandise, and erred in not finding that said merchandise was and is not an oil, and erred in concluding, holding, and deciding that the duty upon said merchandise was and is 25 per cent ad valorem, and in not concluding, holding, and deciding that there was and is no duty upon said merchandise, but that the same was and is free of duty.

And your petitioner further prays this Honorable Court for an order that the said Board of General Appraisers do return to this Court the record and evidence taken by them, together with a certified statement of the facts involved in said case, and their decision thereon, and that upon said record and evidence, and such further evidence as may be taken herein, the Court proceed to hear and determine the questions of law and fact involved in said decision, respecting the classification of said merchandise and the rate of duty imposed thereon under said classification, and that upon such determination, said decision of said Board of General Appraisers be reviewed, reversed, and set aside; that your petitioner may recover said sum of money as assessed against it, as hereinbefore stated, and its costs, and that this Honorable Court afford such other and further relief to petitioner as may be right and just in the premises.

[Corporate Seal] SOUTHERN PACIFIC COMPANY.
By CHAS. F. CROCKER,
Vice-President.

Attest:
E. C. WRIGHT,
Secretary.
FRED'K B. LAKE,
Attorney for Petitioner.

[Endorsed]: Served Aug. 26, 1897. E. B. Jerome. D. C. Filed August 26th, 1896. W. J. Costigan, Clerk. By W. B. Beaizley, Deputy Clerk.

In the Circuit Court of the United States, Ninth Circuit, Northern District of California.

In the Matter of the Application of the SOUTHERN PACIFIC COMPANY, for Review of Decision of United States General Appraisers, Relative to Classification of Certain "Creosote" Merchandise Imported by said Southern Pacific Company.	No. 12,247.

Order of Court for Return of Board.

Whereas, the Southern Pacific Company, a corporation organized and existing under the laws of the State of Kentucky, as importer, has applied to this Court for a review of the questions of law and fact involved in a decision of the Board of United States General Appraisers on duty at the Port of New York, in the State of New York, which said decision was made and rendered on the 27th day of July, 1896, in the matter of the protest 27026 B|3893, classifying said merchandise for duty as "distilled oil," dutiable at the rate of 25 per cent ad valorem, under paragraph 60 of the act of Congress entitled "An Act to reduce taxation, to provide revenue for the Government, and for other purposes," adopted August 27, 1894, which said merchandise was imported into the United States at the said Port of San Francisco, Califor-

nia, and entered at the Customhouse thereof March 19, 1895, which said merchandise is more fully described as being the merchandise subject to consumption entry No. 3652, made at said Customhouse at said port; and

Whereas, said Southern Pacific Company has duly filed its application and petition for a review of said decision, praying, among other things, that the said Board of United States General Appraisers be ordered to return to this Court the records and evidence taken by them in said case, together with a certified statement of the facts involved in such case, and their decision thereon:

Now, therefore, upon consideration of the premises, upon motion of Fred'k B. Lake, attorney for said applicant and petitioner, it is hereby ordered that the three United States General Appraisers on duty at the Port of New York, State of New York, do, with all convenient speed, return to this Court the record of said matter and the evidence taken by them therein, together with a certified statement of the facts involved in said case, and their decision therein.

And it is further ordered that this order be entered upon the minutes of this Court, and served by the United States Marshal for the Southern District of New York on each member of said board of three general appraisers, by delivering to each of them a certified copy thereof.

JOSEPH McKENNA,

Judge.

[Endorsed]: Filed and entered Sept. 8th, 1896. W. J. Costigan, Clerk.

In the Circuit Court of the United States, Ninth Circuit, Northern District of California.

In the Matter of the Application of the SOUTHERN PACIFIC COMPANY, for Review of Decision of United States General Appraisers, Relative to Classification of Certain "Creosote" Merchandise Imported by said Southern Pacific Company. } No. 12,247.

United States of America,
Northern District of California,
City and County of San Francisco. } ss.

I, W. J. Costigan, Clerk of the Circuit Court of the United States, of the Ninth Judicial Circuit, in and for the Northern District of California, do hereby certify the foregoing to be a full, true, and correct copy of an original order of Court, signed, filed and entered herein on the 8th day of September, 1896, in the above and therein entitled matter, as the same remains of record and on file in the office of the clerk of said Court.

In witness whereof, I have hereunto set my hand and affixed the seal of said Circuit Court, this 8th day of September, A. D. 1896.

[Seal] W. J. COSTIGAN,
Clerk U. S. Circuit Court, Northern Division of California.

[Endorsed]: I hereby certify that on the 22 day of September, 1896, at the city of New York, in my district, I personally served the within order upon George H. Sharpe, one of the within named United States General

Appraisers, by exhibiting to him the within original, and at the same time leaving with him a copy thereof.

I hereby certify that on the 23 day of September, 1896, at the city of New York, in my district, I personally served the within order upon George C. Tichenor and H. M. Somerville, two of the within named United States General Appraisers, by exhibiting to each of them the within original, and at the same time leaving with each of them a copy thereof.

Dated Oct. 1, 1896.

JOHN H. McCARTY,

United States Marshal, Southern District of New York.

Filed Oct. 6th, 1896. W. J. Costigan, Clerk.

In the Circuit Court of the United States for the Northern District of California.

J. P. LAKE, [Seal]
Chief Clerk, Board of U. S. General Appraisers.

In the Matter of the Application of the SOUTHERN PACIFIC CO., for a Review of the Decision of the Board of U. S. General Appraisers as to the Rate, etc., of Duty on Certain Distilled Oil Imported by Them in the Vessels and on the Dates Named Herein.

Suit No. 1350. Return of the Board of United States General Appraisers to the order of Hon. Joseph McKenna, Circuit Judge. Dated New York, Oct. 16, 1896.

Return of Board of U. S. General Appraisers.

The Board of United States General Appraisers, sitting at New York, in response to the order of the Court

in the above matter, make the following return of the record and evidence taken by them in the above matter, and of the facts involved therein, as ascertained by them.

They state that a letter, hereto annexed, marked Exhibit "A," was received from the Collector of Customs at San Francisco, submitting, under the provisions of section 14 of the act of June 10, 1890, the letter from the naval officer, marked Exhibit "B," and the protest, marked Exhibit "C," and described as follows:

Colls. No.	Board No.	Protestants.	Vessel.	Date of Entry.
3652	27026–B.	Southern Pacific Co.	Rail.	Mar. 19/95.

The report by the U. S. Appraiser referred to in Exhibit "A" is annexed as Exhibit "D," and the samples referred to therein are returned under another cover, marked "Samples in Suit 1350|1."

In their consideration of said protest the Board had before them certain testimony heretofore taken in regard to goods similar to those covered by the protest herein. A copy of said testimony is annexed as Exhibit "E," being testimony taken in the matter of the following protests, viz.: 5556-F, 5734-F, 7544-F, 8358-F, 2289-F, 3277-F, 5303-F, 96222-A, 96801-A, 96802-A, 96218-A, 98418-A, 99306-A, 602-F, 1116-F, 2572-F, and 8794-F.

On July 27, 1896, the Board rendered their decision herein, a copy of which is annexed as Exhibit "F."

A copy of a report of the U. S. Chemist at New York, to whom the samples were submitted for analysis, is annexed as Exhibit "G."

Exhibit "A."

Customhouse, Port of San Francisco,
May 8, 1895.

I submit herewith the protests described below with the accompanying invoices against my assessment of duty at the rate of 25 per centum ad valorem on certain

liquid creosote or creosote oil, claimed to be a coal tar preparation n. o. p. f., returned by the Appraiser as distilled oil, and assessed with duty under par. 60, act of August 28, '94, in accordance with Boards' ruling of Mar. 24, '91. (S. S. 10958.) The requirements of section 14, act of June 10, 1890, have been complied with by the protester. Invoices and Appraisers' report are inclosed; samples sent separately.

Respectfully yours,

E. B. JEROME,

Spl. D. Collector of Customs.

To the Board of U. S. General Appraisers, New York.

Invoice No.	Name of Importer.	Vessel.	Date of Entry.
3652	Southern Pacific Co.	Rail.	Mch. 19/95.
4375	" " " "	"	" 30 "

Enclosed please find report of N. O. also.

Note.—In transmitting protests, the requirements of article 63, Regulations of August 7, 1890, should be strictly complied with. The number of inclosures should always be stated, and, in counting the same, each separate, detached paper, or group of papers (fastened together by pins, mucilage, or otherwise), should be counted as one.

(Ed. 6-27, '93-5,000.) T. B. No. of inclosures, 1.

[Endorsed]: 27026-B. Port of San Francisco, May 8, 1895. John H. Wise, Collector of Customs. Transmits protest of the Southern Pacific Company, against classification of liquid creosote or creosote oil as a distilled oil under par. 60, N. T. No. of inclosures, 1. Received by Board of U. S. General Appraisers May 13, 1895.

Exhibit "B."

PROTEST.

San Francisco, April 13, 1895.

To the Collector of Customs, District and Port of San Francisco:

Sir: We hereby protest against the liquidation of our entry, and the assessment and payment of duties as exacted by you on 2200 casks coal tar product, upon which duty has been assessed at twenty-five per centum ad valorem under par. 60, act of Aug. 28, 1894, as distilled oil; marks and numbers said to be P. I. C., or no marks, but this protest is intended to cover and apply to all the goods of the same kind and character mentioned in the invoice or entry, whether specifically mentioned herein or not.

Said merchandise was imported by us on the 19 day of March, 1895, in the railroad from New Orleans, and is more fully described in consumption entry Mar. 19, '95, No. 3652.

The grounds of our objections are that the article in question is not a distilled oil, but is, at ordinary temperature, a solid waxy crystal, the chief constituents of which are naphthalene, tar acids, and pitch, and as such should be admitted, free of duty under par. 443 of act of Aug. 28, 1894, as product of coal tar not specially provided for.

We pay the amount exacted solely to obtain possession of the goods, and claim that the entry should be re-adjusted, and the amount overcharged refunded to us.

We also give notice that we intend the duplicate protest, herewith submitted for transmission by you to the Board of General Appraisers, under the rules of your of-

fice, to be, as well, an appeal to the Secretary of the Treasury from your decision.

Yours respectfully,
SOUTHERN PACIFIC CO.
By W. H. WHITELY,
Attorney.

[Endorsed]: Entry No. 3652. Bond No. ——. Protest. San Francisco, Apr. 13, 1895. Messrs. Southern Pacific Co. against liquidation of entry, assessment, and exaction of 25 per cent on coal tar product. Vessel, railroad. From New Orleans. Date of arrival, Mar. 19, 1895. Date of Entry, Mar. 19, 1895. Southern Pacific Co. Adjuster's Office. Customhouse, S. F., Cal. Received Apr. 13, 1895.

Exhibit "C."

Office of the Naval Officer of Customs,
Port of San Francisco, May 7th, 1895.

Hon. John H. Wise, Collector of the Port:

Sir: The protest of the S. P. R. R. Co., invoices Nos. 3652-4375, against duty on certain dead oils, is overruled, it being my opinion that S. S. 10958 cover the case.

Respectfully,
JOHN P. IRISH,
Naval Officer.

[Endorsed]: Port of San Francisco, Cal., Naval Office, May 7, 1895. John P. Irish, Naval Officer. Subject: Protest of S. P. R. R. Co., Entry Nos. 3652-4375. Dead oils or liquid creosote. No. of inclosures, 5, and accompanying samples. Received by Board of U. S. General Appraisers, May 13, 1895.

Exhibit "D."

Port of San Francisco, Cal.,
Appraiser's Office, April 18th, 1895.

Hon. John H. Wise, Collector of Customs:

Sir: The protest of the Southern Pacific Company against the return of certain liquid creosote covered by invoices 3652 and 4375 is not well taken. The Special Examiner of Drugs reports that the creosote in question is a product of certain series of hydrocarbons in the coal tar. Coal tar is composed of the following hydrocarbons of the aromatic group. Commencing with benzol, xylol, naphthal, carbolic acid, dead oils or heavy oils, naphthalene, anthracene, pyridine basis, or pitch according to their distillation point or temperature. Benzole has the lowest, and pitch has the highest, distillation point. Tar is also more or less mixed with ammonia and water.

The samples herewith submitted are the product of the middle group of these series, and could not be prepared by fractional distillation, thus showing clearly that they are a distillation product of the coal tar. The importations in question are covered by S. S. 10958, and were correctly returned as distilled oil.

Yours respectfully,
JAMES C. TUCKER,
Appraiser.

Invoices and protests inclosed.

[Endorsed]: Port of San Francisco, Cal., Appraiser's Office, April 18th, 1895. James E. Tucker, Appraiser. Subject: Report on protest of the Southern Pacific Company. Invoiced 3652 and 4375. No. of inclosures, 4, and samples accompanying.

Exhibit "D."

Office of the Appraiser of Merchandise,
Port of New York, N. Y., June 25th, 1896.

(Copy.)

Dr. Edward Sherer, Chemist in Charge:

Sir: Referring to a sample, marked "27026-B," submitted with letter of transmission, "27026|7 B," dated June 8th, 1896, from Hon. Geo. C. Tichenor, President, Board of General Appraisers, I have to report that the sample has a specific gravity of 1.0502S, and contains, approximately, 5 per cent of carbolic and cresylic acids, the remaining 95 per cent being made up of the usual constituents of the ordinary dead oils of commerce, consisting almost wholly of naphthalene and its derivatives, with the basic oils, parvoline, collidine, coridine, leucoline, and bitumens dissolved therein. The merchandise, as a whole, is an oily body and complicated mixture of complex chemical compounds, and also a product of coal tar eliminated by distillation.

Respectfully submitted,
HAYDN M. BAKER,
Chemist.

Approved:
EDWARD SHERER,
Chemist in Charge.

Approved:
WALTER H. BUNN,
Appraiser.

Exhibit "E."

Before Board A, U. S. General Appraisers.

	Protests.	
In the Matter of the Classification Under the Tariff Act of Certain so-called Dead Oil. The MICA ROOFING CO., Protestant.	96222A	5556F
	96801A	5734F
	96802A	7544F
	2289F	8358F
	3277F	

Testimony.

Present: General Appraiser TICHENOR.

Appearances: For the Treasury Department: WM. J. GIBSON, Esq.

For the Protestant: ALBERT COMSTOCK, Esq.

H. J. WEBSTER, Stenographer.

Protests 96222A, etc., page 2.

New York, June 26, 1896.

WM. H. H. CHILDS sworn.

Examined by Mr. COMSTOCK:

Q. Give your full name to the stenographer, please.

A. Wm. H. H. Childs.

Q. Your business or occupation?

A. I am one of the proprietors of the Mica Roofing Co.

Q. The business of which concern is what?

A. Distillation of coal tar, and manufacture of roofing materials.

Q. Are you personally familiar with the imported commodities of that company? A. I am.

Q. And can identify them by invoice descriptions?

A. I can.

Q. Do you know what was the body which was described on some of your invoices as so many barrels of coal tar product? A. Yes, sir.

Q. Was all of the merchandise imported by your concern and described on its invoices as so many barrels of coal tar product one and the same substance, Mr. Childs?

A. It was.

Q. Are you familiar with the product described on some of your invoices as "blast furnace creosote oil"?

A. I am.

Q. Was all the merchandise imported by your house same thing? A. It was.

and described as blast furnace creosote oil one and the

Q. Are you familiar with the merchandise described on some of your invoices as crude carbolic acid?

A. I am.

Q. Was all merchandise so described on any of your invoices one and the same thing? A. It was.

Q. Mr. Childs, you have stated that you are familiar with the products under all of these names, and that each name always meant one and the same thing. Now, state whether all those names meant one and the same thing.

A. They did.

Q. Have you a sample of that thing?

A. I have.

(Witness presents sample in a bottle. Sample marked "Exhibit 1, 96222A," etc.)

Q. Do you know that the merchandise in this bottle represents any of your imported goods?

A. All the oil as it is received is emptied from the barrels and pumped into one large receiving tank. I went over yesterday and drew that, or had it drawn, myself.

Q. Under your personal supervision?

A. Yes, and it has been in my possession ever since.

Q. Is anything else put in this tank except this imported material of yours? A. Nothing at all.

(Counsel for the protestant offers Exhibit 1 in evidence.)

By Mr. GIBSON:

Q. This sample is not a part of any of the goods included in these invoices on which you have protested, is it? A. Part of all of them.

Q. I understand you to say you took this sample out yesterday? A. I did.

Q. Have all the goods in those invoices been in that tank ever since these goods were imported?

A. Part of it has, certainly; it has been drawn from as we use it, and as the oil comes in, it is put into the

tank, and it is a sample of the oil as received.

Q. How long do you ordinarily keep your oil in the tank—this dead oil?

A. It depends on its use; sometimes we are busy and we use it very fast; then we have oil constantly coming in to replace it.

(Counsel for the protestant admits that the article is dead oil.)

Q. Has any of this merchandise remained in this tank since March, 1896? A. Yes, sir.

Q. How much of it, about?

A. I couldn't tell you. We are drawing as we use it.

Q. You have been putting in a great deal since that time?

A. No; we have not had much oil coming in of late.

Q. Do you know who manufactures this oil on the other side?

A. I don't know. We buy through our purchasing agent on the other side.

Q. You don't know whether it is the same manufacturer each time or not?

A. I couldn't testify to that.

(Counsel for the Treasury Department objects to the admission of the sample in evidence. (Exhibit 1, 96222A, etc.) Exhibit 1 is admitted in evidence.)

By Mr. COMSTOCK:

Q. I want you to tell me whether all of the merchandise about whose names and character you have been asked, and which you say is represented by the sample Exhibit 1, is practically one thing, or is practically several different things.

A. Practically one thing—dead oil.

Q. Are different portions of your importations put to varying uses, or are they put to various uses?

A. Nine-tenths of it to one use.

Q. And the remaining tenth?

A. We sell it out in a small way.

Q. Is there anything about that remaining tenth that is different from the other nine-tenths?

A. No, sir; nothing.

Q. Now, Mr. Childs, you say you are distillers of coal tar. Have you ever made the same body as is represented by this sample? A. I have.

Q. Tell me what it is made of.

A. It is a product of coal tar, got in the distillation of coal tar.

Q. Have you, in your business, to do with articles known as distilled oils? A. I have.

Q. Is the article about which you have been testifying here included among those known as distilled oils?

A. It is not.

By Mr. GIBSON:

Q. Do you sell this dead oil? A. I do.

Q. As you receive it? A. I do.

Q. Is it ever ordered from you as a distilled oil?

A. Never.

Q. Who do you sell it to?

A. Sell it to paving men for softening pitch; sell it to lamp-black makers; sell it to roofers; sell it sometimes as crude carbolic acid.

Q. It is not what is commonly known as coal tar, the product made from the production of coal gas?

A. Coal tar is obtained by the carbonization of coal in the manufacture of gas.

Q. Now, this article which you say is the same here, and which is called blast furnace creosote oil, is that produced in the same way?

A. Practically the same way.

Q. Is it really produced in the same way?

A. It is the same product, produced in a different way, is the proper way to state it.

Q. The crude carbolic acid that you have testified here to, is that produced in the same way that coal tar is produced?

A. No, crude carbolic acid is quite different from coal tar, and is not produced in the same way.

Q. How is it produced?

A. It is produced from the distillation of coal tar.

By Mr. COMSTOCK:

Q. State positively, if you can, whether or not any protests in the name of your house that are pending before this Board are on the same body as represented by Exhibit 1.

A. I can say they are on the same body.

Q. What can you state about the meaning of the name "blast furnace creosote oil," which is found in some of your invoices, particularly as to the words "blast furnace"?

A. It is a creosote oil that comes from Scotland, produced at the iron works there.

Q. And you have testified that it is produced from coal tar. How does the term "blast furnace" come to be associated with coal tar?

A. They condense their gases and smoke and produce coal tar, which is distilled and makes the so-called black furnace pitch and creosote oil or dead oil.

Q. Are those blast furnaces, then, a recognized source of coal tar?

A. In Scotland, just as much as the gas companies.

By Mr. GIBSON:

Q. Is this blast furnace creosote oil, as you speak of it, when you receive it here, is it in the shape that it is produced at the blast furnace?

A. Yes, exactly, as far as I know, the crude product that comes from the blast furnace.

Q. You never saw it as it is produced there, did you?

A. I never have, no.

Q. And all you know in regard to that fact is hearsay, is it? What you have been told?

A. I sent a man over to investigate, and I have his report.

Q. Then your knowledge is derived from what he told you? A. It was.

Q. And has not this creosote oil gone through a process of distillation? A. It has not.

Q. I understood you to say before, on your cross-examination—perhaps I am mistaken—that all these three kinds of oil have gone through a process of distillation from coal tar?

A. Yes; that is the first primary distillation when they were produced. The coal tar was distilled, not the oil.

Q. And then it became dead oil? A. Yes, sir.

Q. Then this substance that was produced at the furnace, as it was a product there, was then distilled, was it not, and made into a dead oil?

A. The coal tar was distilled in the usual way, and the dead oil produced in the usual way.

By General Appraiser TICHENOR:

Q. You said, in reply to a question from the Government's counsel, that you had never sold dead oil as distilled oil. Now, tell me, did you ever sell any oil as distilled oil by that name?

A. I never remember to have received an order for distilled oil in my life for any of the products that we produce.

Q. Your orders are received, are they not, by their commercial names?

A. By the commercial name of the product.

By Mr. COMSTOCK:

Q. But do you, or do you not, know from your business experience which specifically named products are included in the oils understood in trade as distilled oils?

A. I do.

Q. And was your previous testimony about dead oil not being included in this class based upon such knowledge? A. Yes, sir.

By Mr. GIBSON:

Q. Do you sell this under the name of dead oil?

A. I do.

Q. Do you receive orders for it as such?

A. Yes, sir; the bulk of our business is under that name.

Q. Do all the people who buy from you order it under that name? A. Nine-tenths of them do.

Q. Under what name do the other tenth get it?

A. Crude carbolic acid.

Q. That is the same thing, is it?

A. The same thing; comes out of the same tank.

TESTIMONY IN BEHALF OF THE GOVERNMENT.

ISAAC D. FLETCHER sworn.

Examined by Mr. GIBSON:

Q. What is your business?

A. I am president of the New York Coal Tar Chemical Company; that is part of my business. I have been connected with that concern under various names for thirty years.

Q. Your place of business?

A. Our office is 253 Broadway.

Q. What is the business of your company?

A. Part of it is the distillation of coal tar, and the refining of products, and the sale of roofing and paving materials and ammonia products and other chemical bodies.

Q. Are you familiar with, and does your corporation deal in, a substance that is commonly known as dead oil?

A. Yes, sir.

Q. Please state how long, and to what extent, you have dealt in that merchandise? A. Thirty years.

Q. Will you state, if you know, how dead oil is produced?

A. It is obtained by the distillation of coal tar. Some of it obtained by the distillation of blast furnace tar.

Q. State whether or not, so far as you know, it is all the subject of distillation, or the product of distillation.

A. It is.

Q. Do you know any merchandise that is bought and sold in the market here under the trade name of distilled oil? A. I do not.

Q. If there was any merchandise that was known in trade and commerce here, and sold, under the name of distilled oil, would you be likely to know it.

(Objected to as calling for a conclusion, which the witness is not likely to be able to give.)

Question withdrawn.

Q. Are you familiar with, and do you deal in, oils that are distilled?

A. I deal in no oils other than are obtained from coal tar.

By General Appraiser TICHENOR:

Q. What other oils than dead oil, obtained from coal tar, do you deal in?

A. I deal in what is known as light oil.

Q. Do you deal in benzine or benzole?

A. Yes, but not under the name of oils. I deal in all the coal tar products, but benzole or naphthas are not considered oils in commerce.

No cross-examination.

W. H. RANKIN sworn.

Examined by Mr. GIBSON:

Q. Your place of business?

A. 91 Maiden Lane, New York.

Q. And your business, what is it?

A. Manufacturing roofing materials.

Q. How long have you been in such business?

A. Twenty-four years past.

Q. Do you deal in what is known, and what was known in trade and commerce in this country, in August, 1894, as dead oil? A. Yes, sir.

Q. What is the extent of your dealing in the article?

A. Well, practically small.

Q. How long have you dealt in it?

A. About 24 years.

Q. Will you state, if you know, how dead oil is produced?

A. It is produced by distillation of coal or gas tar.

Q. State, if you know, whether there is any merchandise sold under the trade name of distilled oils?

A. Well that question seems to me is not plain. Of course I do know that there was lots of oils sold as distilled oil, but I never knew of any coal tar product being sold as distilled oil.

Q. Well, the question was, as you don't seem to have understood, did you know whether or not, in August, 1894, and prior to that time, there was merchandise that was bought and sold in the trade in this country under the name of distilled oils?

A. Not of a coal tar product; no, sir.

No cross-examination.

By General Appraiser TICHENOR:

Q. Do you know of any article having the trade name of distilled oil?

A. As I said before, not of a coal tar nature or product.

Q. Well, of any nature or product?

A. Well, yes; we call petroleum a distilled oil.

Q. But is that bought and sold by the name "distilled oil," or by the name "petroleum"?

A. I don't know of any product where they bill it, list it, or advertise it as a distilled oil. I don't know of any.

By Mr. COMSTOCK:

Q. Your answer wherein you referred to petroleum—did that include crude petroleum, or only refined?

A. The refined.

ISAAC D. FLETCHER recalled for cross-examination.

Examined by Mr. COMSTOCK:

Q. Mr. Fletcher, you testified that dead oil was produced from coal tar or blast furnace tar, if I understand you aright. Do you know from what substance blast furnace tar comes? A. Yes.

Q. What?

A. It is tar that is produced by the condensation of the gases in the blast furnace operations at the blast furnaces.

Q. Gases of what?

A. The gases of coal.

Q. Then it is a coal tar, is it not?

A. Well, it may be classed under that head, but the process is different from what is ordinarily known as coal tar.

Q. It is not gas coal tar, but blast furnace coal tar, is it not?

A. Well, of course, it comes from coal, but it is an entirely different product from what is known as coal tar. They would not pass, one for the other, in commerce.

Q. Neither one variety could be mistaken for the other variety? A. No.

By General Appraiser TICHENOR:

Q. But, Mr. Fletcher, is this blast furnace tar known as coal tar?

A. I think not; I think it is known as blast furnace tar, to distinguish it from coal tar.

By Mr. COMSTOCK:

Q. Is blast furnace tar a product which, to your knowledge, is bought and sold at wholesale in the markets of this country?

A. It is not obtained in this country at all.

Q. Either from blast furnace or in the market, you mean?

A. I mean to say it is not produced here.

Q. Is it a commodity bought and sold in the wholesale markets of this country, to your knowledge?

A. Well, I should say not; I think it is only known here as an imported article, purchased by certain tar distillers.

Before Board A, U. S. General Appraisers.

In the Matter of the Classification of Certain so-called "Dead Oil." WARREN CHEM. & MFG. Co., Protestant.	Protests,	
	96218 A	1116 F
	98418 A	2572 F
	99306 A	8794 F
	602 F	

Testimony.

Present: General Appraiser TICHENOR.
Appearances: W. J. GIBSON, Esq., for the Government.
ALBERT COMSTOCK, for the Protestants.
H. J. WEBSTER, Stenographer.

Protests 96218A, etc., page 2.

New York, June 26, 1896.

ALFRED H. SMITH sworn.

Examined by Mr. COMSTOCK:

Q. State your full name to the stenographer.

A. Alfred H. Smith.

Q. And your occupation.

A. Superintendent of the factory of the Warren Chemical and Manufacturing Company.

Q. What is the nature of the operation as carried on in that factory?

A. Distillers of coal tar and manufacturers of roofing materials.

Q. Are you familiar with the product which has been imported by your company, and which is described on its invoices as "blast furnace creosote oil"?

A. Yes, sir.

Q. Have you seen that body in the condition in which it has been imported and operated upon it at your works?

A. I have, sir.

Q. Are you equally familiar with the article which has been imported by your company and described as so many barrels of coal tar product? A. Yes, sir.

Q. Are you equally familiar with the merchandise which was subject of your importation per "Croma," and of the informal or appraisement entry which I now show you? A. Yes, sir.

Q. What was, or what were, all of those articles, Mr. Smith?

A. Well, some of those importations were coal tar; the others were dead oil—what is commercially known in this country as dead oil.

Q. By coal tar, do you mean the tar in its original and entire body?

A. Yes, sir; its original consistency.

Q. That was the subject of the informal entry that I have shown you, was it not? A. Yes, sir.

Q. And of no other? A. No other.

Q. Now, please produce a sample representing the merchandise described by any one of the names that I have read you, and state which name or names it represents.

A. Here is a sample of dead oil, by steamer "Manitoba."

(Sample marked Exhibit 1, 96218A, etc., June 26, 1896.)

By the WITNESS.—Also sample of dead oil, per "Croma."

(Sample marked Exhibit 2, 96218A, etc., June 26, 1896.)

By the WITNESS.—Also sample marked dead oil, 1895, taken from one of these importations.

(Sample marked Exhibit 3.)

Q. How do you know that each of these samples represents some of your imported product?

A. I have taken them from the barrels that we imported.

Q. At the works?

A. Yes, sir; I took those myself.

Q. That is true of all of them, is it?

A. Yes.

(Counsel for the importer offers the samples in evidence.)

By Mr. GIBSON:

Q. Referring to sample 1, was that taken out of any

particular cargo or importation that you can recall yourself?

A. Yes, sir; that was taken out of a lot of this oil that was imported and came here by the "Manitoba."

Q. Is that sample No. 1 a part of the merchandise as to which you have protested here? A. Yes, sir.

Q. You are sure of that? A. Yes, sir.

Q. Now, in regard to sample No. 2; that, you say, arrived by the "Croma"? A. Yes, sir.

Q. Is that sample a part of the merchandise as to which you have protested, that arrived by the "Croma"?

A. Yes, sir; taken out of one of the barrels of that lot, landed on our dock.

Q. As to which you have protested?

A. Yes, sir.

Q. Can you identify that by the protest?

A. Well, I know that those are protested.

Q. Well, will you just look at the protest by the "Croma" and see as to which protest that merchandise was a part.

By Mr. COMSTOCK.—I object to the form of the question, and insist that the witness should identify the sample with the entry, and not with the protest. There is no indication that he has anything to do with the protest.

By General Appraiser TICHENOR.—The protest is made upon merchandise imported by the "Croma," so that it seems to me that the identification of the goods by the "Croma" is all that is necessary.

(Invoice No. 2301, included in entry per "Croma," No. 133104, shown witness.)

By the WITNESS.—I identify that as being a sample of that particular invoice.

By Mr. GIBSON:

Q. Now, in regard to sample No. 3, what merchandise is that a sample of?

A. That is a bulk sample of two or three different lots, which were taken from a tank where the barrels were emptied and pumped into this tank, and I can't tell which vessel that identical sample was from.

By General Appraiser TICHENOR:

Q. I understand you to say, Mr. Smith, that it is a bulk sample representing several importations that had been emptied together in a tank. A. Yes, sir.

By Mr. GIBSON:

Q. You can't identify it as to any particular one?

A. No, sir.

Q. Can you identify it as to any particular number of invoices that are here?

A. No, sir; I would not feel safe in doing that. That is a sample of the imported oil, but to say which vessel it was, I couldn't say.

By General Appraiser TICHENOR:

Q. Are you certain, Mr. Smith, that it is a sample of importations that are subject of protest here?

A. Yes, sir; I am certain that this is a sample of the imported oil, of which I understand there is a protest. I don't know how many there are protests on, or anything about that; only that there are protests

By Mr. GIBSON:

Q. Have these samples been in your possession ever since they were taken out?

A. Yes, sir.

Q. And you are certain, are you, that they are in the same condition now that they were when you took them out of these packages? A. Yes, sir

By Mr. GIBSON.—As to the sample No. 3, I don't think there is any connection with that with any particular invoice, nothing to show but what some foreign substance was put in this tank.

By the WITNESS.—There is no foreign substance in there, because they were simply pumped into the tank, the difference being where you take three barrels and

put them together, or whether you take from each individual barrel.

By Mr. GIBSON.—I make no objection to samples 1 and 2. No. 3, I don't think has been identified as belonging to one of these importations, and I don't think it ought to be taken as a sample of this merchandise.

By General Appraiser TICHENOR.—The Board will take it for what it is worth.

By Mr. COMSTOCK:

Q. Now, Mr. Smith, tell me what you do with the several importations of the bodies represented by these samples when you get them?

A. They are used for softening pitch.

Q. Do you use all of your importations such as you have identified here, and regarding which you have stated that you know what they were—excepting always the simple coal tar—for one and the same purpose?

A. Very nearly so; it is either softening pitch, or softening asphalt.

Q. I mean to say, do you put each and everyone of these importations to the same purpose or purposes to which you put the others? A. Exactly.

Q. There is no distinction between them in that respect? A. No, sir.

Q. Is there any practical distinction between them, in substance, composition, or source?

A. No, sir.

Q. What is their source?

A. They are part of the coal tar.

Q. Part of coal tar? A. Yes, sir.

Q. Have you yourself made, or superintended, the making of these same bodies?

A. Yes, sir; every day.

Q. At your factory in Brooklyn? A. Yes, sir.

Q. And what you have made has been made from coal tar? A. Yes, sir.

Q. And had you means of identifying it in substance and in its entirety with these samples?

A. Yes, sir.

Q. Are you prepared to testify whether or not the different importations represented by these samples and by the protests now before the Board may have varied in precise chemical elements? A. No.

Q. But whether they did or not, would you adhere to your testimony that for use, for name and for all practical purposes, they are one and the same thing?

A. Yes.

Q. Mr. Smith, do you have personal contact in your business with bodies known as distilled oils?

A. We have not in several years.

Q. You have had, in the past, have you?

A. Yes, sir.

Q. And you personally?

A. Yes, sir; I made all the tests myself.

Q. Now, state whether the several varieties of the merchandise covered by your samples and testimony are known as distilled oils. A. No, they are certainly not.

(The last question is objected to as leading.)

Cross-Examination.

By Mr. GIBSON.

Q. How are these products known to you, that you protest as to here, under what heads?

A. How is it known to me, sir?

Q. Yes. A. It is known to me as dead oil.

Q. Are you familiar with the method of manufacturing this merchandise, which you have here?

A. Yes, sir; I have been so for a great many years.

Q. Have you ever seen it manufactured at the place and by the people from whom you purchased on the other side? A. No, sir.

Q. You don't know how they manufacture it there?

A. No, sir; I have never been on the other side of the water.

Q. Who is this manufactured by?

(Objected to, as the witness says he has never been there, and he cannot speak otherwise than as the invoices do.)

A. I do not know who the goods were manufactured by, sir.

Q. Have you ever been informed?

A. Never been informed.

Q. This dead oil is a product that is produced by a process known as distillation, is it not?

A. Yes, sir.

Q. Distillation of coal tar?

A. Yes, sir; it is what is known as the heavy oil; it is the second product from the coal tar.

Q. What is the first product?

A. Water and light oil; they distill at about the same point.

Q. That is taken off, and then the second distillation produces?

A. Produces the heavy oil.

Q. Included in your protests?

A. Yes, sir.

By General Appraiser TICHENOR:

Q. You said you were familiar with distilled oils?

A. Yes, sir.

Q. How are they known?

A. Well, they are known by the product which you want to arrive at. There was a time when there was a demand in this country for benzole and naphthol, and at that time we made benzole and naphthol, and that product is made from the light oil, the part of the oil that comes over with the water, the part of the oil which is lighter in specific gravity than the water.

Q. What I was going to ask you is, are they known by

their commercial names as benzole or naphthalene, or whatever it is?

A. In the trade, they are, sir; but commercially they would be known as distilled oil. The different products derived from the bases of coal tar are very numerous, some of them having no value, but they can be separated by different formulas of treating with acids, or redistilling, as the case may be.

Q. In trade, are not these oils known by their names, such as benzole or dead oil or what not, rather than by the term "distilled oil"? A. Yes, sir.

Re-direct Examination.

By Mr. COMSTOCK:

Q. What I want to know is, Mr. Smith, as to these articles about which you have testified in answer to the questions of the General Appraiser, whether they are or are not included in a class of articles known as distilled oils.

(Objected to as leading. Objection overruled.)

A. In relation to benzole and naphtha, it would be known as distilled oil.

Q. And does, or does not, that class include the articles represented by the three samples you have produced.

A. It does not include them.

By General Appraiser TICHENOR:

Q. Are or are not benzole and naphthol produced by the same process from coal tar as dead oil?

A. No, sir, it is not.

Q. How are they produced?

A. They are produced by redistillation, in the first place, and then treating with acid, and neutralizing the acid afterward, and a second fractional distillation.

Q. It is a process of distillation or fractional distillation in either case, is it not?

A. And treating with acids and neutralizing the acids afterwards.

Q. Then I understand the treating with the acids would be the only difference in the process?

A. There is a vast difference, because you observe, your temperatures; you have to get your boiling points to a certain given point; for instance, if it was 90 per cent, or 50, or 30, benzole we are making, we would have to run them different in that way.

Q. Then it is a question of temperature rather than process, isn't it?

A. Yes, but the temperature being part of the process.

Q. In either case, it is a process of distillation and fractional distillation, is it?

A. Yes, sir, in connection with what is termed "treating."

By Mr. COMSTOCK:

Q. Treating in the case of the dead oil, or only in the case of the other bodies?

A. No, no treating of dead oil; only in the case of the benzole and naphtha.

Q. Is there as much difference, Mr. Smith, between the processes of producing dead oil and those for producing the products which are known as distilled oils, as there is between the process of producing naphtha and that of producing naphthalene?

(Objected to. Objection sustained.)

Q. Mr. Smith, state how, as to degree or amount, the difference between the processes for producing dead oil, and those for producing benzine and naphtha compares with the difference between the process for producing naphtha and that for producing naphthalene—whether the differences are greater in the first instance, or less.

A. Well, there is really no difference; as soon as your oil is heavie than water, you run that oil off, which

leaves your third body, your residue which would be pitch. You distill off a sufficient amount of this dead oil to leave the pitch at the consistency you want it for use.

Q. Now, you say that, for benzine and naphtha, there are more elaborate processes? A. Oh, decidedly.

Q. Now, I ask you, contemplating that difference between these processes, how it compares with the difference between the process of producing naphtha and that for producing naphthalene. Is it greater or less difference, or about the same difference?

A. The naphthalene is a part of the dead oil, the part that crystallizes in the dead oil; comes over at the same time with the vapors of the dead oil, and is part of the dead oil.

Q. How is it extracted therefrom?

A. Simply decanted off.

Q. Is it a process of precipitation?

A. No, it congeals; it crystallizes; forms a sort of a wax.

Q. Is that the only process intervening between dead oil and naphthalene—that distillation?

A. That takes place at a lower temperature; for instance—it comes over very high, you understand—in the neighborhood of 600 degrees Fahrenheit.

Q. And as it cools, this crystallizes out?

A. Yes, sir.

Q. And that is all there is in the production of naphthalene, after you get dead oil? A. Yes.

Q. Mr. Smith, do you know what that body is which is described on one or more of the invoices as "green oil?"

A. Yes, sir.

Q. What is that body?

A. It is a filtration of anthracene oil.

Q. Produced from what?

A. From coal tar.

Q. How does that compare as to the use it is put to, if you know, with the samples you have mentioned?

A. For the same uses.

Q. Poured right into the same tanks?

A. Yes, sir.

By Mr. GIBSON:

Q. Does the same state of facts apply to that oil as apply to the other?

A. Yes, sir.

Q. Same description, processes, and production?

A. Yes, sir.

By General Appraiser TICHENOR:

Q. Does your firm sell, or has it been selling, dead oils

A. Yes, sir.

Q. Naphthalene? A. Yes, sir.

Q. Benzole?

A. When we were making it, we sold it, of course; it is several years since we made any.

Q. Did you ever have an order or a request for a quotation of anything simply as distilled oil?

A. Not to my recollection; no, sir.

Q. Your orders would come, then, for the things by their name?

A. It would be a specific name.

Before Board A, U. S. General Appraisers.

In the Matter of the Classification under the Tariff Act of so-called "Dead oil." SCHOELKOPF, HARTFORD & MACLAGAN, Protestants. } Protests 91832 A, etc.

Testimony.

Present: General Appraiser TICHENOR.

Appearances: For the Treasury Department, W. W. J. GIBSON, Esq.

For the Protestants, ALBERT COMSTOCK, Esq.

H. J. WEBSTER, Stenographer.

New York, June 26, 1896.

HARRY COMER sworn.

Examined by Mr. COMSTOCK:

Q. What is your business, Mr. Comer?

A. I am superintendent of the Lehigh Valley Creosoting Company.

Q. Were any importations made for the interest of your company, and at its desire, by anyone else than the company itself, and if so, by whom?

A. Schoelkopf, Hartford & Maclagan.

Q. What was the substance, or what were the substances, which that concern imported at your order?

A. Dead oil.

Q. Dead oil was the only substance , was it, which they imported at your order?

A. Dead oil was the only substance.

Q. Could you recognize a sample as fairly representing those importations, if it were shown you?

A. Certainly.

Q. Have you had opportunities for personal examination of the product about which you are testifying?

A. Yes, sir.

Q. And have used such opportunities?

A. Yes, sir.

Q. Examine Exhibit 1, in case 96222A, and state whether or not that properly represents the article you have been testifying about.

A. I recognize that as dead oil.

Q. And as fairly representing the dead oil imported for you by Schoelkopf, Hartford & Maclagan?

A. Fairly, I guess.

Q. Mr. Comer, do you know what the product was about which you have been testifying, and which you say is fairly represented by the sample which has been shown you? A. I know it.

Q. What was it? A. It is dead oil.

Q. What was it by derivation? What was it derived

from, if you know? A. Coal tar.

Q. Have you yourself witnessed the production of it?

A. I have

Q. Where?

A. In nearly every tar distiller's works in England and Scotland.

Q. Had it any other name in the markets of this country than dead oil?

A. Yes, sir.

Q. What? A. Carbolic acid.

Q. Have you both bought and sold the article in the markets of this country? A. I have.

Q. For how long past? A. Right along.

Q. For how many years?

A. For the last ten years.

Q. Are you prepared to testify whether or not different lots of it may vary in precise chemical constitu ents or formula?

(Objected to as leading. Objection overruled.

A. I am not.

Q. Irrespective of such question of variation, is there any practical difference between one and another of the importations of the body you have testified about, in use, in name, or in trade status.

(Objected to. Objection overruled.)

A. No, not to my knowledge.

Q. How extensively have you used it?

A. Thousands of gallons.

Q. What do you do with it when it first arrives here?

A. As I have use for it, I dump it into my tanks.

Q. And do you dump it all as it comes right into the same tanks or into different tanks, according to any possible difference between—

A. Into one tank.

By Mr. GIBSON:

Q. Are these the same kind of goods that are imported by Schoelkopf, Hartford & Maclagan?

A. Yes, sir.

Q. They are the same kind?

A. Yes, sir.

Q. The same kind of goods that have been imported by them for the last four or five years, are they?

A. Yes, sir.

Q. Is not this product, which you call dead oil, known in England and Scotland as tar oil or creosote oil?

A. It is known as creosote oil, by name.

Q. And also as tar oil? A. Also as tar oil.

Q. And that is the same as this article here which is known as dead oil, is it not? A. Yes, sir.

Q. Is there any substance that is sold in the markets here under the name of a distilled oil? A. Lots.

Q. Well, for instance, what?

A. Refined petroleum is distilled oil.

Q. Well, I know it is distilled oil, but is it bought and sold and known in trade under the name of distilled oil, and bought and sold under that name?

A. As a trade name?

Q. Yes. A. Not that I know of.

Q. Well, I know it is distilled oil, but is it bought and here under the trade name of distilled oil?

A. I do not, sir.

Q. There are three methods of producing oils, are there not, by distillation, and by pressure or compressure, and by rendering, are there not?

(Objected to on the ground that the witness has not been shown to have any knowledge as to what has been known as distilled oils. Question withdrawn.

New York, June 29, 1896.

JAMES HARTFORD sworn.

Examined by Mr. COMSTOCK:

Q. Of what firm or concern are you a member, Mr. Hartford?

A. Schoelkopf, Hartford & Maclagan, Limited.

Q. Is that firm the one that has made these numerous protests that are up for hearing to-day? A. Yes.

Q. Are you personally familiar with the merchandise imported by that firm? A. I am.

Q. Examine invoice in 91832A, and state whether you know what the article was which it described.

A. I do.

Q. I notice that the description in this invoice is so many barrels of coal tar product. Have you had the same kind of merchandise under any other names that you can recall—any other invoice names? A. Yes.

Q. What others do you think of?

A. Dead oil of coal tar, crude carbolic acid, coal tar product, coal tar preparation.

Q. How about the name blast furnace creosote oil? Has it sometimes come so invoiced, or do you know an article which would be described by those terms?

A. I do, but we have invoiced it as crude carbolic acid.

Q. Would you recognize what was meant by each of these names that I have given you or which you have stated? A. Yes, sir.

Q. What would such product be? The product that would be designated by any of these several names, or all of them?

A. It would be coal tar creosote. Some of them might be blast furnace.

Q. And the others derived from what source?

A. From coal tar.

Q. Now, I want you to tell me whether you deal at wholesale in coal tar. A. Yes, we do.

Q. In the markets of this country?

A. In the markets of this country.

Q. How long have you so dealt?

A. Well, my firm has dealt for the last eight years, but I have dealt long before that.

Q. Tell me what are the known and recognized sources of the product which is dealt in as coal tar in the markets of this country?

A. The great source of coal tar is the gas works.

Q. Is there any other source?

A. Yes, there is the blast furnace process, but that is not used in this country, as far as I know.

Q. But is abroad? A. Yes, in Scotland.

Q. Do you say, then, that coal tar is produced from blast furnaces as well as from gas works?

A. Yes, certainly.

Q. State, so far as you know, the process by which coal tar is produced at blast furnaces.

A. The coal is mixed with the iron in a large crucible furnace, and the blast is applied and the fumes are condensed, and the coal tar obtained that way.

Q. Have you handled, commercially, this variety as well as the house variety of coal tar?

A. We have imported it.

Q. Is any distinction made between them in the trade?

A. Not that I know of; they sell them, just the one as the other; sometimes people ask for a thin tar, and they give them the blast furnace tar, but there is no difference, as far as that is concerned.

Q. Now, state what relation this coal tar creosote bears to coal tar itself.

A. Coal tar creosote is one of the distillates of coal tar that is obtained when the coal tar is distilled, along with a lot of other products.

Q. Examine Exhibit 1, 96222 A, and state what it is, if you can tell.

A. I would recognize it as coal tar creosote.

Q. The same commercial body about which you have testified as being covered by your own protests?

A. Yes.

Q. To what use, as far as you know, is this body put, Mr. Hartford?

A. There are a great many uses; it is used for making lamp-black, used for creosoting lumber; used for disinfecting, as crude carbolic acids, and I think there are a variety of other uses. It is used for painting wood to preserve it. I think it is also used for burning or illuminating, but not in this country.

Q. Does your house deal in any body or class of bodies known as distilled oils?

A. I don't know anything of that kind that we deal in.

Q. You don't use the term in your line of goods?

A. No; not at all.

Q. But you say you have dealt at all times for the last ten years and more in this product about which you have testified A. Yes, sir.

Q. Mr. Hartford, does the testimony you have given apply to all the importations made in the name of your house, irrespective of for whose use or interest they may have been made, and upon which you have protests now pending before this Board, in which you claim the right to free entry of the product as a preparation of coal tar?

A. They do.

Mr. COMER recalled.

Examined by Mr. COMSTOCK:

Q. Mr. Comer, have you personally dealt at wholesale in coal tar in the markets of this country?

A. I have.

Q. For how long? A. Ten years past.

Q. State what the body is which is known and has been known as coal tar in the markets of this country for ten years past, in relation to its source.

A. One source.

Q. What is its source? A. Coal.

Q. By what process or processes is it derived from that source?

A. At gas works, in the manufacture of coal gas, and at blast furnace works, when they are making iron.

Q. Do you say that the product both of the blast furnaces and of the gas works is known as coal tar commercially in this country?

A. I believe it is; to my knowledge it is.

Q. Have you dealt in both varieties?

A. I have.

Q. Is any distinction made between them in the trade, in respect of their being called or not called coal tar?

A. No, excepting that perhaps someone might call it, or designate it, blast furnace coal tar, and another house might go to work and ask me for gas coal tar, but it is both coal tar.

By Mr. GIBSON:

Q. Have you ever seen what you have denominated blast furnace coal tar produced? A. Yes, sir.

Q. Been at the furnace where it was produced?

A. Day by day.

Q. Have you ever imported any of it?

A. I have.

Q. When?

A. I imported it in the vessel "Lidskjalf;" I don't remember the date.

Q. Is there much of that kind of coal tar imported here?

(Objected to as irrelevant and immaterial. Question withdrawn.)

Mr. HARTFORD recalled as for cross-examination.

By Mr. GIBSON:

Q. Have you ever seen the blast furnace coal tar produced? A. No, sir; I have not.

Q. All that you know about it is what you have been told?

A. What I have been told and what I have read in books.

Q. Have you ever imported any of it for your firm?

A. Yes, sir.

Q. Does your firm ever buy or sell any oil under the name of distilled oil? A. No, sir.

By General Appraiser TICHENOR:

Q. Mr. Hartford, you testified that these bodies, described by various names in your invoices, are known to you as coal tar creosote? A. Yes, sir.

Q. Are they known as dead oil?

A. Dead oil of coal tar.

Exhibit "F."

(Not for Publication.)

In the Matter of the Protest 27026B-3893 and 27027B-3894 of SOUTHERN PACIFIC CO. against the Decision of the Collector of Customs at San Francisco, Cal., as to the Rate and Amount of Duties Chargeable on Certain Tar Oil Imported per Railroad from New Orleans and Entered March 19, and 30, 1895.

Before the U. S. General Appraisers at New York, July 27, 1896.

Opinion by TICHENOR, G. A.—The merchandise here in question was imported in casks, and is described in the invoices as "liquid creosote."

It was assessed for duty at 25 per cent ad valorem under the provisions in paragraph 60, act of August 28, 1894, for "distilled oils," and is claimed by the protestants to be exempt from duty under paragraph 443 of said act.

We find as facts, from the testimony of Doctor Haydn M. Baker, chemist in the laboratory attached to the Appraisers Office at New York, to whom samples of the merchandise were submitted for chemical examination, and from knowledge acquired in the consideration of other cases relative to merchandise of the same general character:

(1) That the merchandise in question is a liquid substance, of a dark brown color and tarry odor, of the specific gravity of 1.05028, and is known generally in commerce as dead oil and creosote oil.

(2) That it is derived from coal tar by distillation, and is a distilledoil. Its chief constituents are naphthalene and its derivatives, along with the basic oils parvoline, coridine, collidine, and leucoline, and bitumens dissolved therein, together with five per cent of crude phenol of the carbolic and cresylic acid types.

It is understood that the protestant contends that the merchandise is not dutiable as assessed, upon the ground that it is not commercially known as a distilled oil. It is not necessary that it should be so known to bring it under that provision. The various oils known to commerce are distinguished in trade by arbitrary names, such, for example, as olive oil, croton oil, lemon oil, cod-liver oil, castor oil, aniline oil, etc., and are not known in commercial sense as "distilled oils," "essential oils," "ex pressed oils," or "rendered oils." These terms are technical, and are used to distinguish the different oils according to the method of their production. It is not disputed that the article here in question is obtained by distillation, and hence, in the sense of the tariff, is known as distilled oil. The provision for distilled oils in paragraph 60 is more specific than the general provision for preparations and products of coal tar in paragraph 443 of the act.

This view is in harmony with the doctrine of the recent decision of the United States Circuit Court of Ap

peals for the Second Circuit, in the case of Matheson & Co. vs. The United States (71 Fed. Rep. 394), to the effect that the provision for "acids" in paragraph 473, act of Oct. 1, 1890, is more specific than the general provision for "all preparations of coal tar not colors or dyes," in paragraph 19 of the act.

These protests are overruled on all grounds. (See G. A. 453 and 942.)

(Signed) H. M. SOMERVILLE.
CHARLES H. HAM.
GEO. C. TICHENOR.

And for a certified statement of the facts involved in said matter, as ascertained by them, the said Board states that said facts are fully set forth in the decision aforementioned, and that no other facts were ascertained by said Board than such as are shown by said decision and other exhibits hereto attached.

H. M. SOMERVILLE,
F. N. SHURTLEFF,
GEO. C. TICHENOR,
Board of U. S. General Appraisers.

[Endorsed]: Filed October 22, 1896. W. J. Costigan, Clerk. By W. B. Beaizley, Deputy Clerk.

In the Circuit Court of the United States, Ninth Circuit, Northern District of California.

In the Matter of the Application of the SOUTHERN PACIFIC COMPANY, for Review of Decision of the Board of United States General Appraisers, Relative to the Classification of Certain "Creosote" Merchandise Imported by said Southern Pacific Company.

Findings of Fact and Conclusions of Law.

This cause and proceeding having come on regularly for hearing and determination before the Court in the

manner provided by law and the act of Congress of June 10, 1890, and evidence, oral and documentary, on behalf of appellant and respondent having been introduced, heard, and considered, and the Court, after duly considering the law and the evidence, and being fully advised in the premises, having heretofore, on the 16th day of August, 1897, given and rendered its opinion herein:

Now, in accordance therewith, hereby makes and renders its decision, finding the following facts and conclusions of law respecting the classification of the merchandise involved herein, and the rate of duty imposed thereon under such classification:

I.

Findings of Fact.

The merchandise in question, consisting of 2,200 barrels of the article hereinafter mentioned and described in the invoices as "liquid creosote," was imported from London, a port in the Kingdom of Great Britain, into the United States of America, at the Port of San Francisco, State and Northern District of California, on the 19th day of March, 1895, by the Southern Pacific Company, and thereupon said merchandise was entered at the Customhouse at said port for immediate consumption.

II.

That thereafter said merchandise was by John H. Wise, as Collector of said Port, classified upon the return of the appraiser of such port as "distilled oil," dutiable at the rate of twenty-five per cent ad valorem, under paragraph 60 of the Tariff Act of August 27, 1894; and said entries were liquidated in accordance with such classification, and the duty upon said barrels of such merchandise so entered for immediate consumption as aforesaid, amounting to the sum of $1,472, was ascertained, levied, and collected by said Collector.

III.

That thereafter said importer, being dissatisfied with such decision of the Collector and said classification of the merchandise involved herein, made and gave due protest and notice of such dissatisfaction, on the ground that the merchandise in question is not a distilled oil, but should be admitted free of duty under paragraph 443 of the act of August, 1894, as a product of coal tar not specially provided for. Thereupon the invoice relating to the importation of said merchandise, and all the papers and exhibits connected therewith were duly transmitted to the Board of United States General Appraisers on duty at the Port of New York, all as provided in said Customs Administrative Act of June 10, 1890.

IV.

That thereafter, on the 27th day of July, 1896, the said Board of United States General Appraisers, after taking evidence therein, made and rendered their decision in said matter, sustaining the decision of said Collector, and overruling said protest, and holding and deciding that said merchandise was not a product of coal tar to be admitted free of duty, but was and is a "distilled oil," and subject to a duty of twenty-five per cent ad valorem, under paragraph 60 of said act of 1894.

V.

That thereafter, in due and proper time, the said importer, being dissatisfied with said decision of the said Board of United States General Appraisers as to the construction of the law and the facts respecting the classification of such merchandise, and the rate of duty imposed thereon under such classification, and in manner and form as required by law and section 15 of said act of June 10, 1890, applied to this Court for a review of the questions of law and fact involved in such decision of the

said Board of General Appraisers; and such proceedings were thereupon had that further evidence was duly taken before a special referee appointed by this Court, and introduced and considered herein as heretofore stated.

VI.

That the merchandise comprising the importation involved in this application and petition for review was, on and before the said 19th day of March, 1895, and now is, known in trade and commerce as "creosote oil," or "dead oil," and was and is a product of coal tar, obtained therefrom by fractional distillation.

VII.

That said merchandise was not, nor is it, a product or preparation commonly or commercially or chemically, or otherwise, known as a distilled oil, but was and is a product of coal tar, not a color or dye, and not otherwise specially provided for in said act.

Conclusions of Law.

As conclusions of law the Court finds:

1.

That this Court has jurisdiction of the matters involved herein.

2.

That the merchandise in question is embraced within the terms and subject to the provisions of paragraph 443 of the Tariff Act of August 28, 1894; is not dutiable, but is entitled to be admitted free of duty under paragraph 443 of the said act.

3.

The decision of the Board of United States General Ap-

praisers herein is hereby reversed and set aside, and the action of said Collector in assessing and liquidating the amount of duties as aforesaid is hereby held to be erroneous.

4.

The importer, Southern Pacific Company, is entitled to a judgment therefor without costs.

Let judgment be entered in accordance herewith.

Dated August 27, 1897.

WM. W. MORROW,
Judge.

[Endorsed]: Filed August 27th, 1897. Southard Hoffman, Clerk.

In the Circuit Court of the United States. Ninth Judicial Circuit, Northern District of California.

In the Matter of the Application of the SOUTHERN PACIFIC COMPANY, for Review of Decision of the Board of United States General Appraisers, Relative to the Classification of Certain "Creosote" Merchandise Imported by said Southern Pacific Company.	No. 12,247.

Judgment.

This matter having come on regularly for hearing before the Court upon the pleadings, and the proofs taken and filed herein, counsel for petitioner and for the respondent appearing, and the same having been argued

and submitted to the Court for consideration and decision, and the Court, after due deliberation, having filed its findings and decision in writing, and ordered that judgment be entered herein in accordance therewith, but without costs:

Now, therefore, by virtue of the law and by reason of the findings and decision aforesaid, it is considered by the Court that the merchandise in question in this matter is embraced within the terms and subject to the provisions of paragraph 443 of the Tariff Act of August 28th, 1894; is not dutiable, but is entitled to be admitted free of duty under paragraph 443 of the said act.

It is further considered and adjudged that the decision of the Board of United States General Appraisers herein sought to be reviewed be, and the same hereby is, reversed and set aside, and it is further considered and adjudged that the action of the Collector of Customs for the Port of San Francisco, in assessing and liquidating the amount of duties upon the merchandise in question herein, be, and hereby is, held to be erroneous.

Judgment entered August 27th, 1897.

SOUTHARD HOFFMAN,
Clerk.

A true copy.

Attest:

[Seal] SOUTHARD HOFFMAN,
Clerk.

[Endorsed]: Filed August 27, 1897. Southard Hoffman, Clerk.

In the Circuit Court of the United States, Ninth Judicial Circuit, in and for the Northern District of California.

In the Matter of the Application of the SOUTHERN PACIFIC COMPANY, for Review of the Decision of the Board of U. S. General Appraisers, Relative to Duty upon Certain Creosote. } No. 12,247.

Certificate to Judgment Roll.

I, Southard Hoffman, Clerk of the Circuit Court of the United States, for the Ninth Judicial Circuit, Northern District of California, do hereby certify that the foregoing papers annexed constitute the judgment roll in the above-entitled action.

Attest my hand and the seal of said Circuit Court, this 27th day of August, 1897.

[Seal] SOUTHARD HOFFMAN,
Clerk.
By W. B. Beaizley,
Deputy Clerk.

[Endorsed]: Judgment roll. Filed August 27, 1897. Southard Hoffman, Clerk. By W. B. Beaizley, Deputy Clerk.

In the Circuit Court of the United States, Ninth Circuit, in and for the Northern District of California.

In the Matter of the Application of the SOUTHERN PACIFIC COMPANY, for a Review of the Decision of the Board of U. S. General Appraisers, Relative to the Classification of Certain "Creosote" Merchandise Imported by said Southern Pacific Company. } No. 12,247 and No. 12,248.

Opinion.

Application by the Southern Pacific Company for a review, under section 15 of the Customs Administrative Act (Act of June 10, 1890; vol. 26 Stat. at Large, 131), of the decision of the Board of United States General Appraisers, relative to the classification for duty of two importations of "creosote" merchandise. Both petitions heard together. Ruling of Board of United States General Appraisers reversed.

JOHN J. De HAVEN, Esq., and F. B. LAKE, Esq., Attorneys for the Southern Pacific Company, the petitioner.

H. S. FOOTE, Esq., U. S. Attorney, and SAMUEL KNIGHT, Esq., Assistant U. S. Attorney, appearing on behalf of the United States.

MORROW, Circuit Judge.—These are two applications, by the Southern Pacific Company, for a review by this Court, under section 15 of the Customs Administrative Act, Act of June 10, 1890 (vol. 26 Stat. at Large, 131), of the decision of the Board of United States General Ap-

praisers, relative to the classification for duty of two importations of "creosote" merchandise. Both petitions were argued together, and precisely the same testimony and the same questions apply to each. The merchandise in question was imported in casks, and is described in the invoices as "liquid creosote." It was imported from London, Great Britain, into the United States at the port of San Francisco. The Collector of the Port of San Francisco classified this "liquid creosote" as a "distilled oil," dutiable at the rate of 25 per cent ad valorem under the provisions of paragraph 60 of the Tariff Act of August 27, 1894, entitled "An Act to reduce taxation to provide revenue for the Government, and for other purposes," and popularly known as the Wilson Tariff Act. (Vol. 28 Stat. at Large, 509, 511.) The importer protested against the imposition of this duty, or any duty, on the ground that the "creosote" in question "is not a distilled oil, but is, at ordinary temperature, a solid, waxy crystal, the chief constituents of which are naphthalene, tar acids, and pitch, and as such should be admitted free of duty under paragraph 443 of act of August, 1894, as product of coal tar not specially provided for." Paragraph 60, under which the "creosote" was classified, provides "Products or preparations known as alkalies, alkaloids, distilled oils, essential oils, rendered oils, and all combinations of the foregoing, and all chemical compounds and salts, not especially provided for in this act, twenty-five per centum ad valorem." Paragraph 443, one of the provisions placing articles on the free list, and under which the importer contends the "creosote" in question should be classified, provides: "Coal tar, crude, and all preparations except medicinal coal-tar preparations and products of coal tar, not colors or dyes, not specially provided for in this act." The question to be determin-

ed is whether the "creosote" comprising these two importations is a "distilled oil," as found by the Board of United States General Appraisers, and, therefore, subject to a duty of 25 per cent ad valorem, or whether it is a "product of coal tar," within the meaning of paragraph 443, and, therefore, entitled to free entry. The Board of United States General Appraisers overruled the protests of the importer, and found that the merchandise in question "is a liquid substance, of a dark brown color and tarry odor, of the specific gravity of 1.05028, and is known generally in commerce as dead oil and creosote oil; (2) that it is derived from coal tar by distillation, and is a distilled oil. Its chief constituents are naphthalene and its derivatives, along with the basic oils, parvoline, coridine, collidine, and leucoline, and bitumen dissolved therein, together with five per cent of crude phenol of the carbolic and cresylic acid types." While the Board found that the merchandise comprising these two importations was known generally in commerce as "dead oil" and "creosote oil," it also found that it was derived from coal tar by distillation, and that it was a "distilled oil." Additional testimony was taken at San Francisco upon an order of reference by the Court. The evidence preponderates largely in favor of the proposition that the merchandise in question is known commercially as "creosote oil" or "dead oil," and that it is the "product of coal tar" by fractional distillation. The testimony, introduced on behalf of the Government, does not show satisfactorily that "creosote" is chemically, or commercially, or even commonly known and described as a "distilled oil." In Warren Chemical Manufg. Co. v. United States, 78 Fed. R. 810, this same question was before the Court. In that case, the Board of United States General Appraisers had classified certain coal tar products as "pro-

ducts known as distilled oils," under paragraph 60. The importer protested, claiming that it was simply a "product of coal tar, not a color or dye, not specifically provided for," and, therefore, entitled to free entry under paragraph 443. It was held that inasmuch as it had not been shown that the article involved in that case was an oil in fact, or that it was chemically or commercially or commonly known as "distilled oil," the decision of the Board should be reversed, and the article entitled to free entry under paragraph 443 as a "product of coal tar." While "creosote" may be termed an oil, still it is not known as a "distilled oil." It is true that the terms "distilled oils" and "products of coal tar," found respectively in paragraphs 60 and 443, are mere descriptive phrases. No question as to the commercial designation of the merchandise in question can arise, for what is known commercially as "creosote oil," or a "dead oil," are not specifically mentioned in either of these paragraphs or in the act. The terms used seem to refer to the mode of manufacture, and it would appear that the Board held the importations in question to be "distilled oils," because they were produced by distillation—fractional distillation. But while it is true that "creosote" is produced by distillating processes, it is nevertheless also true that, according to the preponderance of the evidence, it is not known as a "distilled oil." That it is a "product of coal tar," there can be no doubt. Such being my view of the evidence, it will, obviously, be unnecessary to consider the other questions discussed by counsel. Even if I were in doubt as to which of these paragraphs applied, such doubt, under the rule of construction relating to tariff acts, would have to be resolved in favor of the importer. (Hartranft v. Wiegmann, 121 U. S. 609, 7 Sup. Ct. Rep. 1240; Twine Co. v. Worthington, 141 U. S. 468,

12 Sup. Ct. Rep. 55.) It may be further observed that, in the Tariff Act of 1883 (vol. 22, p. 493), Congress made a decided distinction between "dead oils," which term is applied to "creosote," and "distilled oils," thereby indicating and recognizing a difference between the two classes of oils, and precluding the inference that the term "distilled oil" might include "creosote" or a "dead oil." The revenue or tariff laws of the United States are regarded as constituting practically one system. (U. S. v. Collier, 3 Blatch. 325, Fed. Cas. No. 14,833.) It is a well-settled rule of statutory construction that expired or repealed acts in pari materia with the act to be construed may be considered by the Court in seeking correct meaning of words and terms employed in enactment to be construed. (23 Am. & Eng. Ency. of Law, 315, and cases there collated. See, also, Reiche v. Smythe, 13 Wall. 162.) I am of opinion, therefore, that the "creosote" comprising the two importations under consideration, is not a "distilled oil" within the meaning of paragraph 60, but that, on the contrary, it is a "product of coal tar" within the meaning of paragraph 443, and as such is entitled to free entry, not being otherwise specially provided for in the act.

It is further contended by counsel for the Government that under the latter part of section 4 of the act under consideration, which provides that, "If two or more rates of duty shall be applicable to any imported article, it shall pay duty at the highest of such rates," the "creosote" in question must be subject to the duty of 25 per cent ad valorem provided for in paragraph 60. It is assumed, of course, that the merchandise in question is both a "distilled oil" and a "product of coal tar," and that, therefore, the duty provided for "distilled oil," being the higher duty, should apply. The contention is untenable. In the first place, I am unable, as stated, to

find from the evidence that the "creosote" in question is a "distilled oil," within the meaning of paragraph 60. In the second place, I do not regard the provision applicable to this case, for the simple reason that it cannot be said, strictly speaking, that there are two rates of duty which can apply to the merchandise in question. If I am correct in holding that "creosote" is a "product of coal tar" within the meaning of paragraph 443, it then is not subject to any duty whatever, but is entitled to free entry. Under this condition of affairs, if the "creosote" be subject to duty at all, there is, obviously, but one rate of duty which is applicable. As was aptly remarked by the Court, in Matheson & Co. v. United States, 71 Fed. R. 394, 395, "As one (paragraph) imposes duty, and the other exempts from duty, it is obvious that Congress did not intend both provisions to apply to the same article."

Without discussing the questions any further, I am of opinion, both from the evidence and under the law, that the ruling of the Board of United States General Appraisers, relating to the two importations involved in these two petitions, was erroneous, and should be reversed; and it is so ordered.

[Endorsed]: Filed August 16th, 1897. Southard Hoffman, Clerk. By W. B. Beaizley, Deputy Clerk.

In the Circuit Court of the United States, Ninth Circuit, Northern District of California.

In the Matter of the Application of the SOUTHERN PACIFIC COMPANY, for a Review of the Decision of the United States General Appraisers, Relative to Classification of Certain Creosote Merchandise Imported by said Southern Pacific Company. } No. 12,247.

Bill of Exceptions.

Be it remembered, that on the 21st day of May, 1897, the said matter came on regularly to be heard in the United States Circuit Court, Ninth Circuit, in and for the Northern District of California, upon the petition and application of the above-named petitioner, appellee herein, the Southern Pacific Company, which said petition and application had been theretofore duly filed in said Court, praying for a review of the decision of the Board of United States General Appraisers theretofore made herein, sustaining the action of respondent and appellant herein, the Collector of the Customs for the Port of San Francisco in said Circuit, District and State, and upon the return to said Court of said Board of United States General Appraisers herein, and upon the testimony and evidence hereinafter set forth, taken before United States General Appraiser F. N. Shurtleff, Esq., as special referee, to whom the case above numbered and specified had been duly and regularly referred by said Court to take and return thereto such further evidence as might be offered by any party herein, which said return of Board of United States General Appraisers and said further ev-

idence, and all thereof, so returned as aforesaid, was made and taken at the times and in the manner hereinafter stated and is as follows:

The return of the Board of the United States General Appraisers herein, with the testimony taken by them, is found on pages 8–46 hereof, to which reference is hereby made, and the same is made a part of this bill of exceptions.

In the Circuit Court of the United States, Ninth Circuit, Northern District of California.

In the Matter of the Application of the SOUTHERN PACIFIC COMPANY, for a Review of the Decision of the United States General Appraisers, Relative to Classification of Certain Creosote Merchandise Imported by said Southern Pacific Company.

Be it remembered, that, pursuant to the order of reference of the Honorable Circuit Court of the United States, Ninth Circuit, Northern District of California, there appeared before me, F. N. Shurtleff, Esq., the referee appointed in said order, at Room 85, in the Appraisers' Building, corner of Washington and Sansome streets, San Francisco, California, on Thursday, the 28th day of January, 1897, at the hour of ten o'clock A. M., John D. Isaacs, Thomas Price, Harry East Miller, and W. M. Searby, witnesses on behalf of the petitioner, and C. A. Kern, a witness on behalf of the respondent, in the above entitled cause and matter; Frederick B. Lake, Esq., and John J. De Haven, Esq., appearing as counsel on behalf of the Southern Pacific Company, petitioner, and Samuel

Knight, Esq., assistant United States Attorney, appearing on behalf of the Collector of the Port of San Francisco, respondent; and the said witnesses, being severally duly sworn by me to tell the truth, the whole truth, and nothing but the truth, did testify as hereinafter set forth:

Thursday, January 28, 1897.

Mr. LAKE.—We have produced here certain samples of creosote. I believe the understanding between counsel for the respondent and ourselves was that the samples produced were virtually the same as the importation which is the subject of this inquiry.

Mr. KNIGHT.—We have obtained from Dr. Kern, the Government chemist, two samples which were taken from the importation at the time it was originally imported, and when he was called upon to examine it as the Government chemist. Those samples can be identified by Dr. Kern, if necessary.

Mr. LAKE.—The samples which we have here were taken from the same importation.

Mr. KNIGHT.—I suggest to you, Mr. Lake, that, as there might be some confusion, you examine your witnesses concerning these various samples, so that we will have in evidence just what the samples are.

Mr. LAKE.—Very well. I will call Mr. Isaacs and examine him briefly upon the question of the identification of these samples. Will you admit that this sample which I now present to you is a sample that was given by you to us as having been taken from the sample originally furnished the Government chemist upon the importation of the merchandise?

Mr. KNIGHT.—Yes, I will admit that.

Mr. LAKE.—We offer in evidence the sample referred to, and ask that it be marked "Petitioner's Exhibit A."

(The bottle containing the sample referred to and offered in evidence was here marked "Petitioner's Exhibit A.'

Mr. LAKE.—Here is another sample, which is at present marked "Sample Creosote. Center No. 2 Tank. November 26, 1896." Upon that I will ask Mr. Isaacs to testify.

JOHN D. ISAACS, a witness on behalf of the appellant and petitioner, being duly sworn, testified as follows:

Mr. LAKE.—Q. What is your occupation, Mr. Isaacs?

A. I am a civil engineer.

Q. In the employ of whom?

A. In the employ of the Southern Pacific Company.

Q. The petitioner and appellant in this proceeding?

A. Yes, sir, I suppose so.

Q. I show you a bottle with its contents, marked "Sample Creosote. Center No. 2 Tank. November 26, 1896," and I ask you where that sample came from, and how the substance came to be imported, and at what time it was imported.

A. Last November the Southern Pacific Company received a shipment of it by train.

Q. November, in what year?

A. November of 1896. The Southern Pacific Company received a shipment by train from New Orleans, consisting of a good many casks (I do not remember how many) of creosote, which was pumped into our storage tanks at Oakland. Those tanks were heated and stirred up, the contents mixed together, and samples were taken in the tanks from different points; one from a point one foot from the bottom, one from a point one foot from the top, and one from a point half way down in the tank, or in the center of it. This particular sample was taken from the center of No. 2 tank. It is the sample that was taken from half way down in the tank.

Q. I will ask you to look at "Petitioner's Exhibit A," and state whether or not it is the same substance as that in the bottle marked "Sample Creosote, Center No. 2 Tank. November 26, 1896," with reference to which I have just been interrogating you.

Mr. KNIGHT.—I object to that question, upon the ground that the witness has not shown himself qualified to testify as to the character of the substance. (To counsel for appellant.) Do you want to get at whether it was taken from the same place?

Mr. LAKE.—Whether it is from the same place and is the same substance.

Mr. KNIGHT.—I will admit it is from the same place.

Mr. LAKE.—And that it contains the same substance?

Mr. KNIGHT.—I have no doubt that it is the same substance.

Mr. LAKE.—I want to show that these two substances are identically the same, simply to identify the two.

Mr. KNIGHT.—Very well. I will withdraw the objection to the question. Our objections in this proceeding are simply noted, to be passed upon hereafter.

Mr. LAKE.—I will change the form of the question.

Q. Mr. Isaacs, are you familiar with the substance of this bottle marked "Petitioner's Exhibit A"?

A. Yes, sir.

Q. In what way are you familiar with it?

A. I have had charge of the Southern Pacific Company's creosote and wood-preserving plants ever since they were built.

Q. Have you had any experience in regard to that substance? A. Yes, sir.

Q. In what way?

A. I have used it and I have analyzed it.

Q. How long have you studied that subject?

A. Since the year 1889.

Q. Do you feel competent to state whether the substances in those two bottles are virtually identical, or not, from analyses made? A. I do.

Q. I am now referring to the substance contained in the bottle marked "Petitioner's Exhibit A," and the substance contained in the bottle marked "Sample creosote. Center No. 2 Tank. November 26, 1896." Are they virtually identical substances?

A. They are both creosotes, but one is a more fluid specimen than the other.

Q. But they are both creosotes, you say?

A. They are both creosotes.

Q. I now show you a bottle marked "Creosote Sample. Center No. 1 Tank. November 26, 1896," and also marked "J. H. McKeen," and I ask you what that is.

A. That is virtually the same substance as "Petitioner's Exhibit A." I have not analyzed it, but it looks like it.

Mr. De HAVEN.—Can we not agree that all of these substances were taken from the substance which forms the subject matter of this contest?

Mr. KNIGHT.—Certainly, I will agree to that. Let me see, though. There may be a little question here as to the condition of the substance at the time the various samples were taken from it. That is: As I understand it, this first sample to which the attention of the witness was called was taken from the product of several tanks.

Q. Is that so, Mr. Isaacs?

A. It was taken from a mixture of all of the carloads of the same invoice.

Q. Of the same invoice, you say?

A. Yes, sir.

Q. And the sample was taken from the center of the

tank after it had been heated and stirred up?

A. That sample was taken from the center of the tank after it had been heated and stirred up, yes, sir.

Q. And there was no other invoice entered into this, except the invoice that we now have under consideration? A. There was not no, sir.

Q. Then, as I understand it, the substance contained in this second bottle which has been shown you—it has not been marked; perhaps we had better consider it as "Exhibit B," and then when it is offered it can be offered under that letter—was taken from the same invoice as the sample "Petitioner's Exhibit A"? A. Yes, sir.

Q. Now, let us take this third bottle, which for the moment we will call bottle "C," and which may be offered in evidence under that letter, if it is offered. I understand you that that was taken from the same invoice?

A. I do not know that, Mr. Knight; I merely ordered that sent. I myself did not see that particular sample taken.

Q. You ordered that taken, did you?

A. Yes, sir.

Q. From what did you order it taken?

A. I ordered a duplicate sample of bottle "B" sent.

Q. You ordered a duplicate sample of bottle "B" sent to Mr. Lake? A. Yes, sir.

Q. And this is the bottle that was sent, is it?

A. Mr. Lake received it. I do not know myself.

Q. So far as your order was concerned, this sample is supposed to be the same as the sample contained in bottle "B"?

A. Yes, sir, that is supposed to be the same

Q. Except that you yourself did not take the sample?

A. That is correct.

Mr. KNIGHT.—That is all.

Mr. LAKE.—Q. Do I understand, Mr. Isaacs, that you ordered the sample bottle "C" to be taken from the same part of the tank as the sample contained in bottle "B"?

A. I ordered an average sample of the same invoice as bottle "B" sent to Mr. Lake.

Q. From what part of the tank would they take such average sample?

A. They should take it from the center of the tank.

Q. Just as the sample in bottle "B" was taken?

A. Yes, sir, after stirring the contents of the tank.

Q. After going through the same operation of heating, and stirring?

A. Yes, sir. But may I say that I do not think that was done with that sample, although it should have been done according to the directions.

Q. What reason have you for saying that?

A. I do not think it was heated and stirred. I think it was simply taken from near the top, or not lower than the middle of the tank, without being either heated or stirred.

Mr. LAKE.—Will you give us the admission now, Mr. Knight?

Mr. KNIGHT.—Yes. I will give you admission that all of these various samples, contained respectively in "Petitioner's Exhibit A" and bottle "B" and bottle "C," together with the samples that were returned from the Board of General Appraisers, the official samples, and the two samples produced from the office of the Government chemist, are taken from the invoices which are the subject of this controversy.

Mr. LAKE.—Very well. We will take that admission. And we now offer in evidence the bottle which has been

referred to in the examination of witness as bottle "B," and ask that the same be marked "Petitioner's Exhibit B"; and also offer in evidence the contents of the bottle which has been referred to in the examination of the witness as bottle "C," and ask that the same be marked "Petitioner's Exhibit C."

Mr. KNIGHT.—And to facilitate the examination, we will offer in evidence at this time, with the consent of counsel, the two samples which have been produced from the office of the Government chemist here, Dr. Kern, and ask that they be marked respectively, "Respondent's Exhibit 1" and "Respondent's Exhibit 2."

(The bottles containing the samples so offered in evidence on the part of the petitioner and on the part of the respondent were here marked respectively as asked for by counsel.)

THOMAS PRICE, called for the appellant and petitioner, after being duly sworn, testified as follows:

Mr. LAKE.—Q. What is your profession?

A. Analytical chemist.

Mr. KNIGHT.—I will admit the high standing and character of Professor Price as a chemist.

Mr. LAKE.—Q. How long have you been such analytical chemist.

A. All my lifetime.

Q. I will show you a bottle, marked "Petitioner's Exhibit C," and its contents, and ask you to state if you made an analysis of that substance.

A. I made an analysis of that substance, yes, sir.

Q. Do you know what an expressed oil is, Professor?

A. Yes, sir. An expressed oil is one that is pressed out of material that is of an oily nature, like the cocoanut and palm.

Q. Are these oils known by that name, as "expressed" oils?

A. Yes, sir.

Q. Do you, as a chemist, know substances known as rendered oils?

A. Yes, sir. Those are oils that are produced by heating, such as lard oil, by which a certain soluble material is separated from the substance. The oil in that case is separated by heat.

Q. Do you know substances known as essential oils?

A. Yes, sir.

Q. What are they?

A. Essential oils are of two kinds. With some essential oils, as, for instance, the various perfumes, attar of roses, and such as that, the oil is simply separated by agitating it in water or in alcohol. The resultant fluid is an essential oil. Then again there are essential oils that are called distilled oils, made by subjecting the same essential oils, extracted in the way mentioned or directly from the material itself, to the process of distillation.

Q. Then you know of substances known as distilled oils also, do you?

A. There are a large number of oils produced by the process of distillation.

Q. But there are substances known as distilled oils, are there not?

A. No, sir, I do not know of substances known as distilled oils as such, except oils prepared as I am telling you.

Q. Prepared from essential oils?

A. Prepared from essential oils, yes, by the process of distillation.

Q. Is this substance which you have analyzed, and

which is contained in the bottle marked "Petitioner's Exhibit C," known as a distilled oil in chemistry, to the trade?

A. No, sir.

Q. What is that substance, Professor?

A. That is one of the products of coal tar, produced by the process of distillation, fractional distillation.

Q. Could you name some of the products of coal tar?

A. Coal tar is one of the products of the distillation of coal in the manufacture of common lighting gas. The first product of distillation is a tarry material containing more or less water. The watery solution contains the ammonia. This is allowed to settle, and the tarry material is subjected to the process of fractional distillation. The first products of distillation which come over are light oils, benzole and naphtha. The second product, on pushing the distillation still farther and increasing the temperature, would be carbolic acid, and naphthalene to a certain extent. The third product in the process of distillation, after further increasing the temperature, would be what is called creosote, which is a complex compound. There then would remain a semi-liquid mass in the retort. If the distillation is pushed still further, there is produced what is called anthracene. There then remains in the retort, pitch. Occasionally that pitch is subjected to a further distillation, and a coke remains. These, roughly speaking, are the four or five products of coal tar when subjected to the process of fractional distillation, or destructive distillation, as it is sometimes called.

Q. You used the expression "light oils," Professor, when you started off with benzole and naphtha.

A. Yes, sir.

Q. Is it not true that when you apply heat to coal tar

that there is not a single product that comes over from the retort except coke, that chemists do not call, by way of description, oil?

A. Yes, sir, they are all called oils.

Q. They call them all oils?

A. Yes, sir, they call them all oils.

Q. What kind of a substance is naphthalene?

A. Naphthalene is a white, solid substance.

Q. When it cools, it becomes white?

A. It separates out from the oil upon cooling.

Mr. KNIGHT.—Q. When you speak of its being a "solid substance," I suppose you mean solid at ordinary temperature?

A. Solid at ordinary temperatures, yes, and when free from any of these other mixtures, like carbolic acid.

Mr. LAKE.—Q. Benzole will hold naphthalene?

A. Benzole will hold naphthalene in solution.

Q. Carbolic acid is an acid, is it not?

A. Yes, sir.

Q. That, also, is called an oil, is it not?

A. Yes, sir, it is called carbolic oil.

Q. You also call benzole an oil, do you not?

A. Yes, sir, a light oil.

Q. And naphtha you also call an oil?

A. Yes, sir.

Q. And when crude anthracene crystals come over, on the application of heat up to 270 degrees Fahrenheit, you call that an oil also?

A. Yes, sir.

Q. You also call sulphuric acid an oil?

A. Yes, sir. It is sometimes called oil of vitriol.

Q. Are you speaking of the term as used chemically or commercially?

A. I am speaking commercially. Coal tar compounds

are all called oils. When describing their manufacture, we simply state that when it is heated up to a certain temperature certain light oils will come over from the retort; and as the temperature is increased the next light oil will pass over. And so on in the process, by increasing the temperature, until the heavier or "dead" oil passes over, which is the creosote of commerce.

Q. With which you are familiar?

A. Yes, sir.

Q. Is the creosote of commerce known as a distilled oil, or as a product of coal tar?

A. Well, it is called creosote oil, and it is a product of the destructive distillation of coal tar.

Q. But is it known in commerce as a distilled oil?

A. No, sir, it is not.

Q. How would you, as a chemist, describe it?

A. I would describe creosote as one of the products of the destructive distillation of coal tar, and that it is itself a very complicated compound, from which you can separate innumerable substances by further treatment with alkalies and acids, and subjecting it to fractional distillation. It essentially consists, of course, of the hydrocarbon oils and carbolic acid.

Q. And anthracene?

A. And anthracene also, yes, sir.

Q. When you say the hydrocarbon oils, you include anthracene and carbolic acid?

A. Yes, sir. The composition of creosote is very complicated. It contains naphthalene, carbolic, and cresylic acid, crinoline, and various other complicated compounds.

Q. This creosote of which you are now speaking is the same substance that is contained in this bottle, "Petitioner's Exhibit C"? A. Yes, sir.

Q. Have you made an analysis of the substance in that bottle, "Petitioner's Exhibit C"?

A. Yes, sir. That comports with the composition of creosote. I may say, of course, that there are scarcely any two samples of creosote that are exactly the same, as it depends much upon the character of the coal from which the creosote is manufactured. For instance, the creosote of nearly every district will vary in composition from that of other districts; and much of the creosote of commerce to-day is not obtained really from the coal tar produced in manufacturing gas, but is the product that escapes from the blast furnace in the smelting of iron.

Mr. KNIGHT.—Q. That is not made here so much as in England?

A. That is made more in England, yes. I speak of that because England is really the great market for creosote

Mr. LAKE.—Q. That is not obtained by distillation at all?

A. Yes, sir. It is tarry compound which is then subjected to distillation. That is the reason I tell you there may be a difference in the composition of creosote itself, depending entirely upon the method of its production and from what product it has been produced.

Q. As a chemist, Professor, how would you describe the substance in that bottle, "Petitioner's Exhibit C," as a distilled oil or as a product of coal tar?

A. I would describe that as one of the products of the destructive distillation of coal tar.

Cross-Examination.

Mr. KNIGHT.—Q. Professor Price, this term "distilled oil," or the term "essential oil," or the term "ex-

pressed oil," or the term "rendered oil"—those terms are not commercial terms, are they? They rather express the manner in which the various products are produced, do they not?

A. Yes, sir.

Q. So far as your experience goes, you do not buy or sell an oil in the market as an expressed oil or a rendered oil; you buy or sell it with reference to the particular source from which it is derived, or perhaps from the particular oil?

A. Certainly.

Q. That is to say, you would require a person who spoke to you of a rendered oil or an essential oil or a distilled oil to specify what kind of an oil he wanted, if you were in that business?

A. I am of course dealing in oils for my purposes, making analyses of them. I would simply go to a place and say, "Give me some lard oil," or "cocoanut oil," or "coal oil," or anything like that. Those are the terms I would use, and they are the ordinary terms used when speaking of oils in general terms.

Q. And among the known distilled oils is the oil in question, is it not?

A. It is a product of the destructive distillation of coal tar.

Q. If a person should come into your place of business and ask for a preparation or product of coal tar, you would require him to specify what form of product he wanted, would you not?

A. Yes, sir, certainly.

Q. You would want to know what distillate he wanted?

A. I would want to know what product of coal tar

he wanted—the light oils, or carbolic, or cresylic acid, or creosote—something of that kind.

Q. In other words, the term "preparation or product of coal tar" is more an expression used to denominate what a substance is than a commercial term? It is more to express what the substance actually is, or from what it is made, than a commercial designation for any one substance?

A. Certainly. A man who buys an oil is not always informed of the method of preparation, nor is it necessary that he should be. He becomes acquainted with a certain kind of oil, say, and without knowing anything about the technical details of its manufacture, he asks for that oil.

Q. As a matter of fact, Professor, neither of the terms "distilled oil" or "product or preparation of coal tar" is a commercial term, is it?

A. No, sir. This I would call creosote, if I wanted to buy it; the substance in this bottle, "Petitioner's Exhibit C," I would not call an oil; I would say, "I want creosote."

Q. You would say if you want to purchase some of a substance similiar to that contained in this bottle, "Petitioner's Exhibit C," "I want creosote"?

A. Yes, sir, I would say "I want creosote."

Q. But you would know, as a matter of fact, that it is not only an oil produced by distillation from coal tar, but you would also know that it is a product from coal tar?

A. Yes, sir.

Q. Regardless of its commercial nomenclature?

A. Yes, sir. I would not ask for creosote oil; I would ask for "creosote."

Q. Professor, does your examination of that oil lead you to testify—that is to say, you did make an examination by distillation of this oil in question, did you not?

A. My examination was made in part by distillation and in part by freezing.

Q. Did you treat it with acids at all?

A. Yes, sir. I treated it with acids, in order to arrive at the percentage of tar acids there. I think the best way to get at this matter is to read the analysis which I made of it. Then you will be able to understand me, and I you. I found the compound to have a specific gravity of 1.044.

Q. That is, it is forty-four hundredths heavier than water?

A. Forty-four thousandths.

Q. I should say forty-four thousandths.

A. Yes, sir. I found that the material is fluid at 78 degrees Fahrenheit.

Q. What would that be Celsius, do you know?

A. I have not my tables here. (The witness is shown a paper) It would be 26 degrees Celsius. Its composition I found to be as follows: Water, none. Distillate from 100 degrees to 200 degrees Fahrenheit, none.

Q. This is all in Fahrenheit degrees?

A. Yes, sir, Fahrenheit. I use Fahrenheit right through here in my analysis. Then the distillate between 100 degrees and 200 degrees Fahrenheit was none.

Q. Nothing came over between those two figures?

A. There was no distillate between 100 and 200 degrees Fahrenheit.

Mr. LAKE.—Q. What would that be, if there had been a distillate?

A. Benzole and naphtha, probably. It would proba-

bly be what you would call dissolved naphtha. Then between 200 degrees and 400 degrees Fahrenheit, I obtained 5.20 cubic centimeters. I took 100 cubic centimeters for the analysis, and between 200 and 400 degrees Fahrenheit, I got 5.20 cubic centimeters of distillate.

Q. What substance was that?

A. That is an oily compound; heavy oils.

Mr. KNIGHT.—Q. You got 5.20 cubic centimeters of heavy oil between 200 and 400 degrees Fahrenheit?

A. Yes, sir. Between 400 and 600 degrees Fahrenheit, I obtained 74.80 cubic centimeters.

Q. Of what?

A. Of a still heavier oil, which, in fact, solidified on cooling down to 40 degrees. There then remained a residue above the temperature of 600 degrees Fahrenheit of 20 cubic centimeters.

Q. That was pitch?

A. Pitch yes; but containing some anthracene. A further examination was made, and the material was found to contain tar acids.

Q. What material was that?

A. (Continuing.) That is, carbolic and cresylic acids.

Q. Let me interrupt you a moment, Professor. I am trying to get at what material it was of which you state you made a further examination.

A. I should have said that in this distillation between 200 and 400 degrees Fahrenheit where I obtained 5.20 cubic centimeters, of heavy oil, those heavy oils held other materials in solution, as I will explain later on. I then subjected the oil to still further heat, between 400 and 600 degrees Fahrenheit, and produced a heavy, dense oil, to the amount of 74.80 cubic centimeters. This oily compound held in solution tar acids, naphthalene, and anthracene, and other compounds. The tar acids

amounted to 8.75 per cent, and naphthalene to the extent of 9.30 per cent. That is, 8.75 per cent of the whole mass was tar acids, and 9.30 per cent was naphthalene.

Mr. LAKE.—What was the percentage of tar acids, Professor? A. 8.75 per cent.

Mr. KNIGHT.—Q. Now, let me see that I understand you. After you had subjected this substance which was the subject of your analysis, to a distillation with a temperature of from 200 to 400 degrees Fahrenheit, you obtained 5.20 cubic centimeters of certain heavy oils, mixed in solution with other matters?

A. Yes, sir.

Q. You took that 5.20 cubic centimeters of heavy oils and subjected it to a heat of from 400 to 600 degrees Fahrenheit?

A. No, sir. The remaining 94.80 cubic centimeters was what was subjected to the heat of 400 to 600 degrees Fahrenheit. I first took 100 cubic centimeters of the substance for analysis, and obtained a distillate of 5.20 cubic centimeters between 200 and 400 degrees Fahrenheit. There then remained 94.80 cubic centimeters, which was subjected to a heat of 400 to 600 degrees Fahrenheit.

Q. Then it was the remainder after the 5.20 cubic centimeters that you subjected to that heat?

A. Yes, sir, to a fractional distillation.

Q. Then in making the statement, you were practically repeating what you told us before?

A. Yes, sir.

Q. I want to know, then, whether or not you subjected that solution, or any part of that solution, or any part of that product, to another treatment than the treatment of fractional distillation of which you have spoken? Did you subject it to a treatment with acids?

A. The distillate was subjected, of course, to the

action of caustic soda, and finally to the action of acids, in order to be able to arrive at what quantity of tar acid the oils had carried over. One hundred grammes of the original substance was taken and kept for about fifteen minutes at a temperature of 40 degrees Fahrenheit. This cooled the mixture so that the naphthalene separated from it. Filtering that in a funnel surrounded with ice, so as to keep the temperature down, there finally remained an oil mixed with the naphthalene, which remnant was pressed, and the equivalent 9.3 per cent naphthalene was separated out.

Q. These were all fractional distillations, were they not, Professor?

A. All fractional distillations, except for the tar acids and naphthalene.

Q. You found, I suppose, that the chief constituents were basic oils, parvoline, collidine, coridine, and leucoline, did you not? Are not those the basic oils largely contained in these creosotes?

A. I did not go into the details of the exact composition of the creosote. I simply subjected it to such an analysis as was necessary in order to determine its adaptability for creosoting purposes. I did not go into details of making a scientific analysis and a separation of the hundreds of materials into which the substance may be separated.

Q. To do that, you would have had to subject it to further treatment with acids, I suppose?

A. Not only with acids, but I would have had to resort to redistillation and treatment by chemicals of different kinds.

Q. Crude phenol is carbolic acid, is it not?

A. Yes, sir.

Q. That is simply another name for it?

A. Yes, sir. It is called phenic acid, too.

Q. Phenic acid is carbolic acid?

A. Yes, sir. And the tar acids may have more cresylic acid one time and more carbolic acid at another time, depending upon the character of the stock.

Q. To what use is the substance in question put on this coast, Professor, so far as you know?

A. I only know of its being put to use for creosoting purposes.

Q. That is, you mean for the purpose of applying to piles to keep the teredo from injuring them?

A. Well, yes, and I believe they are largely used (I do not know whether they are here or not) for sleepers.

Q. Sleepers on railroad tracks?

A. Yes, sir, for preserving the sleepers under the rails, and to prevent decomposition. I do not know of any other use to which they are put here.

Q. Do you know whether or not this substance is used at all in mixing paint.

A. No, sir, I do not. I cannot see what purpose it would serve in paint, from a chemical point of view.

Q. The lighter oils, the first substances coming over from the fractional distillation of which you speak, are used in paints, are they not?

A. Yes, sir, benzole is used for that purpose.

Q. But not the oils of the specific gravity of the substance in question? A. No, sir.

Q. That is too heavy, I suppose?

A. The object of using these lighter oils, like benzole and benzine and naphtha, is simply that they will evaporate and leave a hard substance behind after evaporation.

Q. As I understand you, the coal tar itself is a distilled product from coal? A. Yes, sir.

Q. Are you able to tell, from the examination that you have made of the substance in question, from what kind of coal that creosote is produced? It is produced I suppose, from a bituminous coal in the first place?

A. Yes, sir. Only bituminous coals produce it.

Q. Are you able to tell what kind of coal that is produced from other than that it is a bituminous coal?

A. No, sir.

Q. It does make a difference in the creosote from what coal it is produced does it not?

A. Yes, sir, there is a difference in composition, according to the coal from which it is produced; for instance, to give you some idea of it, there is a material difference even between the creosote produced from the gas works of London and that produced from the gas works of Manchester, and those cities are near neighbors, or would be so considered here.

Q. Then there is a difference between the blast furnace coal tar and that produced from gas, too, is there not?

A. Yes, sir. There is less carbolic acid in that from the blast furnaces.

Q. There are other products of coal tar besides distilled oil, are there not, Professor?

A. Yes, sir.

Q. What other products (products or educts; I use the term in a general way) are there of this coal tar, Professor?

A. I understand your meaning. There are a great many others. For instance, nearly all of the coloring materials that are now in use are derived from coal tar.

Q. But they are not distilled oils, are they?

A. No, sir. They are separated from some of these products, like from this creosote material.

Q. That is to say, they are separated by acids?

A. They are separated by acids and by alkalies, depending entirely upon what it is—by regular chemical operation.

Q. As a matter of fact, Professor, there are hundreds and hundreds of products which are derived from coal tar, are there not?

A. Yes, sir

Q. The products of coal tar are almost innumerable, are they not?

A. Yes, sir

Q. And a great many of those products are not what would be ordinarily known as distilled oil?

A. No, sir, they would not. They have been obtained however, from a product that was once distilled. For instance, you take sul-phenol, which I sometimes take, and phenacetin—all of those are compounds of coal tar.

Q. The coal tar is originally distilled, in order to get the substance which the phenace tin or these various other products are produced from?

A. Yes, sir

Q. Phenacetin is in the form of a powder, is it not?

A. Yes, sir. For instance, in order that we may be thoroughly understood, I will say this: If one takes coal tar, which is one of the by-products in the manufacture of coal gas, and breaks it up roughly, he will have the four main products that I have mentioned, or four divisions.

Q. That is to say, there are four main divisions?

A. Yes, sir. Then you take each one of those main divisions, and it can in turn be broken up, and from it innumerable compounds produced. I suppose the compounds of coal tar can be reckoned up into the thousands at the present time. They are simply the result of work-

ing further along one of those four lines, along the line of the first, second, third, or fourth main product.

Q. That is, you take the various products derived from the first, second, third, and fourth fractional distillations, we will say.

A. Yes, sir

Q. And you would, by working those products further, for instance by acids, or by other treatment, get all those innumerable substances as a result?

A. Yes, sir.

Q. Some of them would be derived from the product of the first distillation?

A. Yes, sir

Q. And some would be derived from the product of the second, and some from the third, and some from the fourth distillation?

A. Yes, sir, making them into other compounds.

Q. As I understand it, in obtaining that product, the product which you have specially referred to, which is contained in this bottle, "Exhibit C"—I suppose in general the same testimony may refer to the substances in all these bottles, with some qualifications?

A. There would be no difference at all to speak of. I think there is a slight difference between the contents of this bottle, and that of the others. As Mr. Isaacs says, probably in this cold weather, in a sample taken, one would get less naphthalene, probably, than there is in the average. Otherwise it is the same.

Q. It will only differ as to the relative quality of naphthalene?

A. Relatively, sir. Otherwise it is identical.

Q. The substance contained in the bottle, "Petitioner's Exhibit C," I understand has not been subjected, as

far as you know, to any treatment by acids. It has simply been distilled, has it?

A. Yes, sir, it has simply been treated by distillation.

Q. Distillation pure and simple?

A. Pure and simple, yes, sir.

Q. To what degree of heat would you say the substance in its present form has been subjected, in the process of distillation? How many degrees Fahrenheit? I refer now to the substance in "Petitioner's Exhibit C."

A. It must have been over 400 degrees, say from 400 up to 600 degrees Fahrenheit, because there is a residue of 20 per cent left after heating it up to 600 degrees, as I found in the distillation which I made of it.

Q. What limit of temperature would you say that substance had been subjected to to present it in its present form?

A. I should say that that had been subjected to a temperature of not over somewhere from 800 to 900 Fahrenheit.

Q. You would say that that is the result of the distillation of coal tar up to about that heat?

A. Yes, sir.

Q. And that that substance has passed over?

A. That substance has passed over, under those conditions.

Q. Dead oil and heavy oil are the same thing, are they not, Professor?

A. Yes, sir.

Q. Do you know whether what are called dead oils or heavy oils are of a greater specific gravity than water?

A. Yes, sir. I suppose those names are simply factory names. A man simply sees that some of the oils float on water, and those he calls lighter oils, and he sees

that there are others that will not float upon the water, which sink down in the water, and those he calls dead oils or heavy oils. Those are simply terms used by workmen to designate the oils.

Redirect Examination.

Mr. LAKE.—Q. Professor Price, I want to ask you this question, in order to get this matter entirely straightened out. I want to be corrected if I am not right. I understood you to say that you would not call this substance an oil at all, that you would call it a product of coal tar. Is that correct?

Mr. KNIGHT.—I object to the question upon the ground, first, that it is ambiguous. The witness should first state whether he is speaking chemically or in the ordinary commercial sense before he answers the question.

Mr. LAKE.—I am speaking chemically now. That is what I intended by the question.

A. No, sir, I would not call that an oil.

Q. I also understood you to say that this substance was not known as a distilled oil, and that you would not so designate it.

A. It is not known as a distilled oil, according to my understanding of a distilled oil.

Q. You simply call it creosote?

A. I would ask for creosote if I wanted that article.

Q. You were also speaking about crude phenols, and you stated that they were carbolic acid?

A. Yes, sir.

Q. Is it not true (I think you stated it before) that that also is called an oil?

A. Yes, sir.

Q. And is obtained by distillation?

A. Yes, sir, it is obtained by distillation.

Q. Is naphthalene called an oil, and is it obtained by distillation?

A. It is obtained by distillation, and I believe it is sometimes also called an oil.

Q. Is not naphtha called one of the lighter oils?

A. Yes, sir, it is called one of the lighter oils.

Q. And is not benzole called one of the lighter oils?

A. Yes, sir.

Q. Is there a single substance that is not known by chemists as an oil, which is produced from coal tar by distillation, from the time they begin to apply heat to the coal tar, except coke?

A. In the subdivisions which I have given, they are all called oils.

Q. Is it not a fact that naphthalene is obtained and can be obtained in a more or less pure state by the application of heat and by distillation?

A. I could not answer that question. I do not know why it should not.

Q. Let me look at your analysis, Professor. I do not think I understand this exactly. I ask you to state for me, please, how much naphthalene there is in the substance, according to your analysis?

A. This material as it came to me contained 9.3 per cent of naphthalene.

Q. That is, with 100 per cent to the whole?

A. Certainly.

Q. And how much tar acids did the whole substance contain?

A. The tar acids were 8.75 per cent of the whole substance.

Q. And how much pitch and anthracene were there in there?

A. The pitch is the residuum remaining. That was 20 per cent.

Q. The residuum was 20 per cent, and there were none of the lighter oils in the substance, were there?

A. No, sir. There is no distillate whatever below 200 degrees. The distillate between 200 degrees and 400 degrees is 5.2.

Mr. KNIGHT.—Q. 5.2 cubic centimeters?

A. 5.2 cubic centimeters, or 5.2 per cent. It is the same, as I took 100 cubic centimeters of the substance for the fractional distillation.

Mr. LAKE.—Q. The distillate between 200 degrees and 400 degrees, as I understand it, would include naphthalene and carbolic acid, would it not?

A. Yes, sir and it would contain a mixture of everything. Maybe there would be a little more carbolic acid in that than in any other portion.

Q. So this is just splitting off the various products between the different degrees of heat as you have given them?

A. Yes, sir, subjecting the substance to fractional distillation at increasing degrees of heat.

Q. So, virtually, each one of those different what I may call segregations of the substance contain more or less of the segregations which went before and the products which are to follow by further distillation. Is that not true?

A. Certainly.

Q. You simply begin to distill, and distill up to a certain temperature, and cut it off there and mark how much that is, what the percentage is. That is the way you did in this case, is it?

A. Yes, sir.

Q. Then you went on distilling, and you cut it off

again at a different degree of temperature, and marked how much distillate there was then?

A. Yes, sir.

Q. And then when you had finally reached a certain temperature, you stopped there?

A. Yes, sir.

Q. That is correct?

A. That is correct.

Q. So the distillate coming over between 200 degrees and 400 degrees Fahrenheit contains some of the same substance as the 74.80 cubic centimeters that came over between the 400 and 600 degrees Fahrenheit?

A. Yes, sir.

Q. And the distillate which came over between 400 degrees and 600 Fahrenheit, the 74.80 cubic centimeters, contained some of the same substances or material as the 20 per cent residuum after a temperature of 600 degrees Fahrenheit had been reached?

A. Yes, sir.

Q. Each contained more or less of the other?

A. More or less, yes, sir.

Q. And the residue was 20 per cent?

A. 20 per cent, yes, sir.

Q. So this analysis is simply splitting off the different products at different degrees of heat?

A. As I said before, this is an analysis simply carried to the extent necessary in order to determine the commercial value of creosote.

Q. For the purposes of trade?

A. For the purposes of trade.

Mr. KNIGHT.—Q. You followed the common form of distillation in this case, did you not?

A. Yes, sir.

Mr. LAKE.—Q. Is there any difference, virtually,

Professor, between any of these so-called oils, these products which chemists call oils, the light oils, the middle oils, the heavy oils, and the anthracene oils in their component parts? Do they differ at all in substance? Are they not all pure hydrocarbon?

A. There is, of course, some nitrogen.

Q. They are all similar in that respect, are they not? All pure hydrocarbon?

A. No, sir. Benzole contains some nitrogen, and the heavy oils have nitrogen, especially the naphthalene. And then you have the carbolic acid.

Recross-Examination.

Mr. KNIGHT.—Q. They differ, however, in their constituent elements?

A. In the percentage, yes.

Q. Professor, let me ask you a question which may prhaps be a little difficult to answer. What is an oil, as the term is known to chemists?

A. Oil is anything that is of an oily nature, slippery between the fingers. There is no dictionary that will tell you exactly what an oil is.

Q. What do you understand by the term "basic oil," in referring to the distillations of the substance in question, of coal tar?

A. All substances in nature are either basic or acid substances. Basic substances are those that are base, and that will combine with an acid and form a salt, a new compound.

Q. This substance, then, as I understand you, does contain naphthalene and its derivatives, along with the basic oils? A. Yes, sir.

Q. And the bitumens that are dissolved?

A. Yes, sir.

Q. Together with crude phenols or tar acids of the cresylic and carbolic acid types? A. Yes, sir.

Mr. LAKE.—We offer in evidence the analysis of Professor Price, to which he has testified, to be marked "Petitioner's Exhibit D."

(Marked "Petitioner's Exhibit D.")

Mr. KNIGHT.—Before you put on another witness, I would like to recall Mr. Isaacs for a few further questions as to the use of this substance.

JOHN D. ISAACS recalled for further cross-examination.

Mr. KNIGHT.—Q. Mr. Isaacs, will you state to what use the subject of this investigation is put?

A. It is used for the preservation of timber.

Q. That is, it is applied to piles, is it not?

A. Piles, telegraph poles, railroad ties, girders, stringers, planking—all kinds of lumber, in fact, to preserve it from rot or attack of insects, or from external or internal decay.

Q. Will you state whether or not it is applied directly, or is applied to this timber after the moisture has been absorbed, or rather, extracted? How is this substance applied to the timber? Is not the moisture first taken from the timber as far as possible, before this substance is applied to it? A. Yes, sir.

Q. How is that done? By creating a vacuum?

A. There are two ways of doing it. Under one system, the timber is put into closed retorts, and is subjected to the action of superheated steam, until the moisture is fairly well evaporated or turned into steam. The vacuum pump is then put to work, and the moist air, or mixed air and steam, is taken out and condensed. If that does not sufficiently dry the timber, the process is repeated. It is sometimes repeated several times, always until the tim-

ber is thoroughly dried. It is necessary, for the complete protection of timber, that it should be not only thoroughly dry, but should be subjected to a sufficient heat, long enough continued, to destroy any germs of decay which are or may be in the timber at the time of treatment.

Q. In that way, also, the creosote itself more thoroughly impregnates the timber, does it not?

A. Yes, sir; that is one object. The other way by which timber is treated is this: It is immersed in a bath of antiseptic fluid, and the heat applied in steam coils to the fluid itself, forming a medium (that is a better way) by which the heat is conveyed from the steam to the timber. As the tie becomes dry, the moisture in the wood, the sap, exudes out from the pores and ends of the timber. Then this is allowed to escape without an air pump, through a condenser, and the amount of vaporization measured in the condenser for the purpose of telling how dry the timber has become. The next process is the process of forcing the creosote in the same retort into the timber sufficiently far to permeate it.

Mr. KNIGHT.—I do not want to take up too much time, but I merely wanted to get at the matter of the application of the substance in controversy.

HARRY EAST MILLER, called for the appellant and petitioner, after being duly sworn, testified as follows:

Mr. LAKE.—Q. What is your profession, Mr. Miller?

A. Consulting and analytical chemist.

Q. I will show you "Petitioner's Exhibit D," and also the bottle marked "Petitioner's Exhibit C."

A. May I just read this over?

Q. Certainly. I will ask you if you are familiar with that substance?

A. (After examination and reading exhibit) I am.

Q. How long have you been a practicing analytical chemist? A. About four years.

Q. From where did you graduate?

A. I graduated from the University of California, and then I took the degree of Doctor of Philosophy at the University of Strasburg, Germany.

Q. Are you familiar with this substance?

A. I am, sir.

Q. What is it?

A. From the analysis—if that is the analysis of the substance, the paper "Petitioner's Exhibit D"—I would say that it is that fraction of distillate of coal tar which is known as creosote.

Q. Is that known as a distilled oil, Mr. Miller?

A. No, sir, it is not known as a distilled oil.

Mr. KNIGHT.—Commercially or chemically?

Mr. LAKE.—Q. Is it commercially or chemically known as a distilled oil?

A. No, sir, it is not known as a distilled oil.

Q. Do you know what an expressed oil is?

A. I do.

Q. Is the substance contained in that bottle, "Petitioner's Exhibit C," an expressed oil?

A. No, sir, that is not an expressed oil.

Q. Do you know what a rendered oil is?

A. I do.

Q. Is that substance a rendered oil?

A. No, sir, it is not a rendered oil.

Q. Do you know what an essential oil is?

A. I do.

Q. Is the substance contained in "Petitioner's Exhibit C" an essential oil?

A. No, sir, that is not an essential oil.

Q. Would you, as a chemist, describe that substance as a product of coal tar, or as a distilled oil?

A. I will say that it is creosote, or the product of coal tar— one of the fractions distilled from coal tar.

Q. Is there any difference between that substance and the other distillates from coal tar? I mean now with reference to its being a hydrocarbon.

A. I would like to answer that question in perhaps a little different way, by saying that in the fractional distillation of coal tar where the receiver is changed and the different products are separated by the temperature, there is no single fraction which does not to some extent contain portions of the other fractions. It is not an exact operation, especially when it is only treated once. Each fraction of the whole distillation would contain portions of every other fraction, though perhaps only a trace.

Q. Is it not true that when heat is applied to coal tar, the first distillate that comes over in the retort is benzole and naphtha?

A. Benzole and carbolic acid and naphthalene and a thousand and one different products designated generally by those terms.

Q. Those are light oils, are they not?

A. They are called light oils, yes, sir.

Q. What are known as the middle oils?

A. The middle oils are those that contain the carbolic acid proper, and also some naphthalene.

Q. And then follow what are known as heavy oils?

A. Yes, sir, what are known as heavy oils or dead oils.

Q. And then comes the anthracene oil?

A. Then comes what is known as the anthracene fraction, yes.

Q. And then there is pitch?

A. Then there is pitch, yes.

Q. Is it not true that when you apply heat to coal tar, there is not a single product, except pitch, that you obtain which is not known as an oil?

A. I would like to modify that. In a crude state, there is not a single product which, if you called one an oil, could not be applied as a term to every other product, with the exception of the residuum, pitch—with perhaps the exception of the very first, when water comes over, and that you could not call an oil.

Q. Is there not water in the benzole when it first comes over? A. Yes, sir, a trifle.

Q. In the crude state? A. Yes, sir.

Q. Then you would call that an oil, would you not?

A. Yes, sir, the whole product you would call oil.

Mr. KNIGHT.—Q. That is, the product which comes over?

A. Yes, sir, the water is only a very small percentage.

Mr. LAKE.—Q. Would you, as an analytical chemist, familiar with this substance, describe it as a product of coal tar or as a distilled oil?

A. I would say it is creosote, a product of coal tar.

Q. That is the way you would describe it?

A. Yes, sir, that is the way I would describe it.

Q. Is it known to the trade as a distilled oil? Is it known as a distilled oil?

A. No, sir, it is not known as a distilled oil.

Cross-Examination.

Mr. KNIGHT.—Q. As a matter of fact, it is a distilled oil?

A. In what way, Mr. Knight?

Q. Practically; that is, looking at the process through which it has been put. It is an oil produced from coal tar by distillation?

A. It is no more distilled oil than any other fraction that comes over. Of course, the term "distilled oil" can be applied in that way. It is called an oil, and it is made by the process of distillation.

Q. Mr. Miller, as a matter of fact, is not the substance in the bottle, "Petitioner's Exhibit C," or in any other of these bottles here, produced from coal tar by subjecting the coal tar to a certain degree of heat, the substance passing over being condensed?

A. That is true, yes.

Q. And this substance is the substance that has passed over between certain degrees of temperature?

A. Yes, sir.

Q. That is known as the process of distillation, is it not? A. Yes, sir.

Q. So that, as a matter of fact, this is an oil produced from coal tar by distillation?

A. I am afraid that would require a definition of the word "oil," which is a most marvelous thing.

Q. Is that not commonly known as an oil?

A. It is commonly known as an oil, yes.

Mr. LAKE.—Q. Is it commonly known as an oil, or what?

Mr. KNIGHT.—You can examine the witness again, Mr. Lake; he is now under cross-examination.

Q. As a matter of fact, Mr. Miller, that is actually known as an oil, whether you call it a dead oil or a heavy oil? A. That term has been applied to it.

Q. And it is commonly and usually known to chemists as an oil of some kind, is it not?

A. Yes, sir, dead oil.

Q. And therefore one of the kinds of oil. Now, it is produced by distillation from coal tar?

A. Yes, sir.

Q. And still do I understand you to say that that would not be known, or is not, as a matter of fact, rather, a distilled oil, striking out the word "known"?

A. Scientifically speaking, or how?

Q. I am speaking with reference to the process through which it has been put, with reference to its method of preparation.

A. Well, it might possibly be called that, but it is not known as that.

Q. I am not now asking for what it might be called. I want to know if, as a matter of fact, regardless of what nomenclature, that term might be applied—regardless of what chemists might call it, or men buying and selling that oil. I say, is it not, as a matter of fact, a distilled oil?

A. No, sir, I would not say it is a distilled oil.

Q. Although it is produced by distillation from coal tar. I want to know what it is, as a matter of fact. I do not care what term is applied.

A. It might be considered as a distilled oil.

Q. Do I understand you to say that you would know it rather as a product or preparation of coal tar than as a distilled oil?

A. That is the way I designate it, yes.

Q. Do you mean to say that that is the commercial designation of it?

A. The commercial designation of it is dead oil, or creosote.

Q. Dead oil or creosote, you say?

A. I have never heard the term "distilled oil" used in that connection.

Q. If you were buying or selling that article, would you refer to it as a coal tar preparation, or would you say, if buying it, "I want creosote" or "dead oil"?

A. I would say creosote, and I would designate by saying creosote that came over at from 230 to 270 degrees centigrade.

Q. You refer by that to the extent to which it had been distilled—the degree of temperature to which it had been subjected? A. Yes, sir.

Q. As a matter of trade parlance, that article is not known as a preparation or product of coal tar any more than it is known as a distilled oil, is it? You do not hear the term "preparation of coal tar" used on the street in buying or selling that merchandise, do you?

A. No, sir; it is known as creosote. That is the name by which it is known, but I think most people know that it is a product of coal tar.

Q. They know it to be such? A. Yes, sir.

Q. But do they call it such?

A. I should use the word "creosote," if I were calling for it.

Q. You would not use the terms "coal tar product" or "coal tar preparation," would you, any more than you would use the term "distilled oil"?

A. I think I would, because, for instance, by this new process of making water gas, there is an oil tar, and that oil tar gives an inferior quality of creosote. So that if I were going to buy any creosote, I would designate it as creosote, a product of coal tar distillation, contradistinction to the other, which gives a very inferior quality of creosote.

Q. So you think it would be necessary that you should

refer to it as the oil which is the dead oil or creosote which is a product or preparation of coal tar?

A. Yes, sir.

Q. Have you ever so referred to it?

A. I have never bought any.

Q. You have never bought any, you say?

A. No, sir.

Q. Have you ever sold any?

A. I have never sold any, either.

Q. Have you ever had any means, then, of knowing especially what the commercial designation of that oil is?

A. I have, sir, because I have visited the Pacific Refining and Roofing Company, who do a good deal of distilling, and buy tar from the gas company, for which I am acting as consulting chemist. So I am quite familiar with the subject. The gas company sells the Pacific Refining and Roofin Company both oil tar and coal tar, and in that way I am familiar with the technical and commercial terms. I have been all through the coal tar distillery here, too.

Q. Do you know of any trade lists or journals, or of any quotations of this substance?

A. No, sir, I can refer you to the specification of Dr. Tidy and Professor Abel, of London, both well known chemists, and among their specifications for creosote, they especially state that the product be from gas works in which the coal is carbonized, in distinction from the oil tar, which is now a commercial article.

Q. But in specifying it, they specify creosote or dead oil, or refer to the particular product of coal tar, do they not, but as a further designation, they say, which is produced from such and such a source, as contradistinguished from oil which is produced from other sources?

A. They say from gas works in which the coal is carbonized, designating it as being from coal tar and not from oil tar.

Q. How would you designate phenacetin, Mr. Miller—by any other term?

A. I would say it is a coal tar product.

Q. You would say it is a coal tar product?

A. Yes, sir.

Q. You would apply the term "coal tar product" as naturally and as commonly to phenacetin as you would to this product, would you not?

A. Hardly, because it is so very remote. In phenacetin the raw material has been subjected to such a process of refinement that it is presented in a state quite remote from coal tar. This substance here is directly from coal tar by distillation, without any further manipulation, whereas phenacetin has been refined and recrystallized, and subjected to further modification.

Q. As I understand you, the phenacetin has in the first place been put through the very same processes as these distillations here, but has been further refined and separated into one of the constituent elements of the coal tar? A. Yes, sir.

Q. But it is very difficult on the first distillation to separate the product into the various ingredients?

A. In fact, Mr. Knight, I do not believe that prenacetin exists in the coal tar or in the distillation as phenacetin. It is built up by synthesis with other products. I do not believe there is any phenacetin in the coal tar.

Q. There are a great many products from coal tar, are there not?

A. There must be a million or more products of coal tar.

Q. Derived in a great many different ways?

A. Yes, sir.

Q. Derived originally, you say, by the distillation of the coal tar, and derived from the product of the distillation by treating that otherwise—with acids largely?

A. Yes, sir; acids and alkalies, and various manipulations.

Q. And a great many of them are not oils or distilled oils, but they have been originally distilled?

A. In the crude state you may call them oils, but of course you can hardly call a crystal an oil. It is a matter of temperature, too, of course. In fact, it comes back to the definition of the word "oil," which, as I say, is marvelous.

Q. Would you say that phenacetin is an oil?

A. No, sir, not in the shape as white crystals.

Q. And you might take a hundred substances which were originally from coal tar, and say that they were not oils, might you not?

A. That is true. But if I take the crude carbolic acid, which is also known as an oil, it is nevertheless the crude acid, and is used as such for some purposes—for disinfecting, and things of that sort.

Q. You might get a great many products from that acid or oil which would not be oil, as we understand it?

A. By further manipulation yes, sir.

Q. Why have you such an aversion to the term "distilled oil," Mr. Miller?

A. Well, the term "distilled oil" is so remarkably indefinite; it would appear to me that the term "distilled oil" is more particularly an essential oil.

Q. There are such oils that are not distilled oils, are there not?

A. Oh, yes, the fact is, you might call sulphuric acid a distilled oil; the term is such a loose one.

Q. That is not a distilled oil, according to paragraph 60 of the Wilson Act.

A. Sulphuric acid is an acid, and is made by a process of distillation. So you might call that a distilled oil. The term has no bounds. I would rather advance something more definite, so you could put your finger on it and say, "This is the substance of which we are speaking."

Q. To sum up, Mr. Miller, is it not a fact that the term "preparation or product of coal tar" is no more a commercial term than the term "distilled oil"; that both of those terms refer simply to either the source or the method from which or by which the oils are produced; and, further, that in order to designate the oil itself commercially, you must refer to it by some specific name?

A. No, sir. Because, as I said before, you take the oil tar creosote and the coal tar creosote, the products of the distillation in the two cases, though both are creosote, are two different things; and to designate the creosote properly, you would have to say of one that it was the product of the fractional distillation of coal tar, while of the other one you would have to say that it was the product of oil tar. It would be positively necessary in that case to bring in the term "coal tar product," in order to distinguish between them.

Q. Do I understand you to say, then, that the term "preparation" or "product of coal tar" is a commercial term?

A. I am not a commercial man. I say that if I were to make a contract for creosote, according to Dr. Tidy's and according to Abell's specifications, I would put in the contract that the creosote furnished should be from coal tar distillation.

Q. But you say that, not being a commercial man, you

would not know whether it was a commercial term?

A. I would not, perhaps, know the commercial term.

Redirect Examination.

Mr. LAKE.—Q. I think you stated, did you not, Mr. Miller, that carbolic acid is called an oil, one of the middle oils?

A. In the crude state it would be. It might belong in the category of a middle oil.

Q. Splitting it up into the divisions I have mentioned, and dividing it up as they do into products derived by the application of certain degrees of heat in each case?

A. Yes, sir.

Q. And you could get more or less of a pure carbolic acid from it by redistillation?

A. By redistillation, yes, sir.

Q. Even in a crude carbolic acid, if you applied your heat and kept watch of it carefully, the percentage of carbolic acid obtained upon first distillation would be very high, would it not?

A. If you regulate your thermometer very carefully, and used great care, you could get a very fair carbolic acid upon the first distillation.

Recross-Examination.

Mr. KNIGHT.—Q. Do I understand, Mr. Miller, that you get a carbolic acid which is not oil by simple distillation? In fact, it is an oil, is it not—ordinarily known as an oil?

A. Carbolic acid pure is not known as an oil. But if I take the fraction of the middle oils in which the crude carbolic acid distilled, and regulate the heat very carefully, and, instead of taking the whole range of 50 or 60

degrees of temperature, I take it in the first instance, and take perhaps 10 or 20 degrees, I could get a carbolic acid which would be a fairly good acid.

Q. Have you ever known that to be done, Mr. Miller? Have you ever seen it done?

A. I have never seen it done, no; I can do it, though.

Q. To what degree of temperature would you subject that oil in order to get that acid pure and simple, without any of the oil?

A. Without any of the oil? That, of course, would be an impossibility. I say I could obtain a fairly good carbolic acid in that way.

Q. But you are making a distinction between acid and oil, are you not?

A. No, sir. I said that this fraction is called a middle oil.

Q. As I understand, the distillate that comes from subjecting coal tar to a certain degree of heat is, for instance, a middle oil? A. Yes, sir.

Q. And that is composed of various ingredients?

A. Yes, sir.

Q. Do I understand you to say that you can get from that middle oil anything that is not known as an oil, by subjecting it to any particular degree of temperature?

A. I said this: that, instead of doing as is usually done in practice, if you take this fraction, middle oil, by having careful thermometers, you could catch a fraction of this fraction in the first instance, and not by redistillation, and you would get a fairly pure carbolic acid.

Q. In the very first instance—the first substance which passed over when you had reached a certain degree?

A. Yes, sir. It would to a great degree belong to the middle oils; the middle oils would contain a good large

percentage of this carbolic acid, crude carbolic acid.

Q. And you would get the crude carbolic acid pure and simple?

A. Not a pure carbolic acid, but you would get a very good carbolic acid, and it would be in or from the middle oils.

Q. As a matter of fact, it is almost impossible, is it not, Mr. Miller, to separate by mere distillation any of these middle, or heavy, or light oils, so that one will not contain a part of the other?

A. That is what I said in the first instance. In each one of the four divisions or fractions, there would be more or less of all the others.

Q. More or less of what had preceded the particular fraction in question, and more or less of what would follow? A. Yes, sir.

Q. They would be mixed in so that the question of the determination of what the substance might be divided into is more theoretical than practical? That is, for instance, we could take this substance, coal tar, and we can, as a matter of theory, divide it into certain definite fractions. You would say that we have coal tar, the distillation of which would produce, first, the lighter oils; second, the dead oils; and third, pitch, giving to each of the oils its specific name. Then subjecting those various distillates to further fractional distillation, we could get other products?

A. Yes, sir.

Q. And those other products are themselves resolved by treating them with acids in some cases, or by further distillation, into other products still?

A. Yes, sir.

Q. As a matter of fact, then, that is more theoretical than practical, is it not?

A. It is practical, too.

Q. It can be done?

A. Yes, sir. Of course, if we wanted to get aniline, we would not go through this whole scheme; it would not be necessary to do it— it would not be a commercial success.

Q. Commercially, then, it would not be produced in that way? A. No, sir.

Q. Have you yourself made any examination of any of the substances contained in the bottles which have been offered in evidence here?

A. No, sir, not of the contents of any of these bottles, but I have made quite a number of analyses of creosote at different times.

Q. You are referring to your knowledge of creosote in general?

A. Yes, sir. None of these samples have been under my observation.

Mr. LAKE.—Q. Is it not a fact, Mr. Miller, that this substance has been distilled so as to drive off the light oils? That is to say, the light oils are not present in this substance, creosote, are they?

A. This is the fraction called heavy or dead oil.

Q. But the light oil is not present in this substance?

A. The lighter oils would not be present in this, except the traces that I have referred to. But I think the analysis which Professor Price has made of the sample he analyzed, states that there are no traces at all.

Mr. KNIGHT.—Q. Can you take that substance and yourself say what has been driven off in the process of distillation before it came over?

A. No, sir, I could not say as to that.

Q. Or at what degree of temperature it was heated to?

A. No, sir. I could merely testify from the analysis.

Mr. LAKE.--Q. Is it not true, Mr. Miller, that by carefully watching the thermometer when you first put coal tar into the retort, you could get over benzole, for instance, and make a good average benzole?

A. Average crude benzole, yes.

Q. The percentage of benzole obtained in that way in the substance brought over as benzole would be very high, would it not?

A. Yes, sir; I think you would get about a so-called 50 per cent benzole, or something of that sort; I would not say positively.

Q. And is it not true that you would get a 50 per cent naphtha also, by carefully watching the thermometer?

A. I have really had no practical experience myself in the distillation, and I could not say positively.

Q. Do you not think as a chemist that that could be done?

A. It might be done, but I do not think it would be commercially practical.

Q. You do not think it could be done commercially—that it would be practical commercially, but it could be done?

A. My opinion is that it could be done.

Q. At any rate, by the application of heat to coal tar, you could get off the light oil, which would only have in it a trace of the middle oils, could you not? It would not have pitch in it?

A. It would not have pitch in it, no.

Q. And it would not have dead oil in it?

A. It might have merely a trace.

Q. A very small percentage?

A. A very small percentage, yes, sir.

Mr. KNIGHT.—Q. Dependent upon the care which you exercised in the distillation, I suppose?

A. Yes, sir.

W. M. SEARBY, called for the appellant and petitioner, being duly sworn, testified as follows:

Mr. LAKE.—Q. What is your occupation, Mr. Searby?

A. Pharmacist, and professor of materia medica in the Department of Pharmacy of the University of California.

Q. How long have you been such?

A. I have been a pharmacist ever since I was a boy. I have been professor of materia medica about twenty-three or twenty-four years.

Q. Are you in your profession familiar with oils?

A. Yes, sir.

Q. I will show you an analysis here, and ask you if you understand it, marked "Petitioner's Exhibit D," and I will also show you a bottle of substance, marked "Petitioner's Exhibit C."

A. (After examination.) I understand the analysis, yes, sir.

Q. Do you recognize this substance in the bottle? I will say that this analysis, "Petitioner's Exhibit D," is the analysis of the substance in the bottle, "Petitioner's Exhibit C."

A. Judging from this appearance and odor, I should say that this analysis, "Petitioner's Exhibit D," is an analysis of that substance, "Petitioner's Exhibit C."

Mr. KNIGHT.—I suppose I ought to object to any testimony given upon an analysis given by someone else, unless he can absolutely identify it as being correct. It is not the testimony of the witness, otherwise.

Mr. LAKE.—I have made proof of it once, the analysis.

Mr. KNIGHT.—You have proved the analysis, but unless Mr. Searby is able to say that that is a correct analysis, it is not his testimony. I have no doubt it is a correct analysis, but Mr. Searby might have some different

means of procedure, and might come to a different conclusion.

The WITNESS.—I have no doubt it is a correct analysis.

Mr. LAKE.—Q. Are you familiar with the products of coal tar, Mr. Searby? A. Yes, sir.

Q. Do you recognize the substance in that bottle "Petitioner's Exhibit C," by odor or in any other manner?

A. I recognize it as a mixture of stuffs from coal tar.

Q. Do you in your profession know what expressed oils are? A. I do.

Q. Is that an expressed oil, as you know it?

A. No, sir.

Q. You also know what are rendered oils, do you not?

A. I do.

Q. Is that a rendered oil? A. No, sir.

Q. And do you also know, Mr. Searby, what an essential oil is? A. I do.

Q. Is that an essential oil?

A. No, sir, it is not.

Q. All of those names are well known to the trade, are they not? A. Yes, sir.

Q. Are you familiar with the expression, "distilled oil"?

A. That is not a common name, so far as I am acquainted with it.

Q. This substance which I have shown you, contained in "Petitioner's Exhibit C," or which is "Petitioner's Exhibit C," is called creosote, according to the testimony. It is used for the preservation of timber. Do you know that substance, or are you familiar with that substance?

A. I am more or less familiar with it, yes, sir.

Q. Have you ever known that substance to be called a distilled oil, Mr. Searby? A. I have not.

Q. Would you call it a distilled oil?

A. I would not.

Q. What would you call it?

A. I would call it a portion of coal tar.

Q. A portion of coal tar? A. Yes, sir.

Q. It is not known as a distilled oil, is it?

A. Not so far as my knowledge goes.

Mr. KNIGHT.—I suggest that perhaps the question should not be quite so leading.

Mr. LAKE.—Q. Are you quite familiar with that substance, Mr. Searby?

A. I am familiar with it, yes, sir.

Q. What have you heard it called?

A. Creosote more frequently than anything else. That is the common name for it.

Q. How would you describe it?

A. I should probably call it commercial coal tar creosote; coal tar creosote. I use the term "coal tar creosote," because in our business we have another creosote which is quite different from that, and we always specify coal tar creosote when we do not mean wood creosote.

Cross-Examination.

Mr. KNIGHT.—Q. This substance is produced from coal tar by distillation, is it not, Mr. Searby?

A. Yes, sir. However, I would not like to say positively that this particular article was made from coal tar. I would say that judging from the large percentage of residue that fails to distill at 600 degrees Fahrenheit, it is just possible that it may be the residue after distilling off the light oil.

Q. You think that perhaps the substance in "Petitioner's Exhibit C" may be the residue after subjecting it to 600 or 700 degrees Fahrenheit?

A. No, sir, after taking off the light oils, the napht ha and benzole and those products. There is just a possibility of it.

Q. That this may be the residue after taking the light oils off?

A. That this may be the residue after taking off the light oils, yes.

Q. You do not know to what degree of temperature the substance in "Petitioner's Exhibit C" has been subjected? A. I do not, no, sir.

Q. For all you know, that might itself be what has been taken off and subjected to a heat of from 600 to 800 degrees Fahrenheit, and not a residue left. Is that not the fact? A. I did not catch your question.

Q. This might itself be the product of the distillation, might it not, and the residue left after that has passed off be another substance, the coal tar having been subjected to a temperature of from 600 to 800 degrees Fahrenheit?

A. It is not likely that that residue would be left after it had been subjected to 600 or 800 degrees Fahrenheit.

Q. Might not this be the substance that has passed off from the coal tar when that coal tar has been subjected to a temperature of from 600 to 800 degrees?

A. That might be.

Q. And in that case this might be the distillate?

A. It might be the distillate, yes, sir.

Q. Distilled oil, as a matter of fact, is not a commercial term, is it?

A. Not with us, so far as I know.

Q. That is, so far as you know, it is not?

A. So far as I know, it is not a commercial term.

Q. It simply describes the process through which the oil has been put; that is, the process by which the oil has been obtained?

A. I do not know how it is applied; I know that as a common thing, it is not a term we use, and I deal in volatile or essential oils to a considerable extent.

Q. But you do not know the term "distilled oil" as a commercial term?

A. I do not know it as a commercial term, no sir.

Q. Speaking of the term "product or preparation of coal tar," you would not use that term itself to apply to this substance, would you? You would refer to it as coal tar creosote, would you not?

A. Yes, sir.

Q. You would denominate it in that way so as to distinguish it from wood creosote?

A. Yes, sir, I would speak of creosote as coal tar creosote or wood creosote, according to which I wanted. That substance is crude coal tar creosote.

Q. You would know by the terms as you have given them what was meant? A. Yes, sir.

Q. You do not import this substance yourself, do you?

A. No, sir.

Q. You are not acquainted with the use of the terms in the importing trade, are you?

A. No, sir, I do not think I am.

REDIRECT EXAMINATION.

Mr. LAKE.—Q. Then you make a distinction between the two forms of creosote, the wood creosote and the coal tar creosote? A. Yes, sir.

Q. And you say you would require the full term to be used in order to explain what kind of creosote was required, a coal tar creosote or wood creosote?

A. Yes, sir.

Q. That they are entirely different substances?

A. They are entirely different substances, yes.

RECROSS-EXAMINATION.

Mr. KNIGHT.—Q. Wood creosote is an oil, is it not?

A. No, sir. It is a mixture of phenols, and it is not an oil.

Q. So, then, as a matter of fact, wood creosote is not produced by distillation, is it? A. Oh, yes.

Q. Is it produced as directly by distillation as this substance in the bottle, "Petitioner's Exhibit C," is?

A. Yes, sir. One is produced by distillation from wood, and the other by distillation from coal tar.

Q. In the case of the wood creosote, how does the substance pass over? Does it assume liquid form after passing over? A. Yes, sir.

Q. And then it solidifies?

A. No, sir, it is a liquid.

Q. It is a liquid, is it? A. Yes, sir.

Q. But not an oil?

A. Not an oil, no, sir.

Q. The substance in controversy here, for instance, in the bottle "Petitioner's Exhibit C," is an oil, is it not?

A. No, sir.

Q. You would not call that an oil?

A. No, sir, it is a mixture of things.

Q. Does not an oil contain a mixture of things? Is that your criterion for determining what is and what is not an oil?

A. That is a mixture of substances, some of which could not possibly be called oils. You could not call anthracene an oil.

Q. Suppose the substance were subjected to further distillation, so much so that whatever there is solid in there should be left, and the remainder pass over. Would you say that the liquid that had passed over was an oil? A. No, sir.

Q. You would not? A. No, sir.

Q. Because it contains what?

A. It contains acids, and so far as I know, it does not contain an oil—a single substance that is an oil.

Q. What is your definition of the term "oil"?

A. That is one of the hardest things in the world to define. I do not think I could give one.

Q. According to your idea, does an oil never contain an acid?

A. I beg your pardon. I did not quite understand.

Q. According to your conception of the term "oil," an oil does not include an acid?

A. An oil is not an acid.

Q. I say, according to your conception, it does not include an acid. Is that your idea of the term?

A. I must explain to you that when ordinary oils take fish oil, for instance, and such as that, are decomposed, we get from one to five or six or more different acids.

Q. Therefore they do contain acids?

A. They do, yes, sir, but they have to be decomposed to yield them.

Q. In this case you would say that this is not an oil because it contains an acid, and it has not been subject to decomposition, to yield the acid? I refer to the substance in "Petitioner's Exhibit C".

A. Yes, sir, it not only contains acid, but it contains other things. So far as I know, it does not contain an oil at all.

Q. I am trying to get at what you mean. What would you say that substance would have to contain in order to contain an oil? As you say, it is a pretty difficult thing to define, but you are laying down what, so far as this investigation is concerned, is an entirely novel idea of

what an oil is. You say that is not an oil and that it does not contain an oil; that it contains acid, but that fish oil contains acids which are yielded when decomposition has taken place. Now, I want to know, why do you say that this does not contain an oil?

A. I will tell you, then, that there are two kinds of bodies which we are in the habit of calling oils; one class of bodies is what are known as the fixed oils, such, for instance, as linseed oil, almond oil, and fish oil; those bodies consist of mixtures in varying proportions of glycerides—glyceryl stearate, glyceryl oleate, glyceryl palmitate, and a number of others; I need not go any further.

Q. That is a fixed oil?

A. That is a fixed oil, yes, sir.

Q. Why are they termsed "fixed oils"?

A. Because they cannot readily be distilled. They are not volatile.

Q. You say they cannot readily be distilled—at what degree of temperature?

A. It is not a question of degree of temperature. You cannot distill them without decomposition, therefore they cannot be distilled. The others are called volatile oils, sometimes called essential oils. In France they are called essences, and in England, some of them are called essences.

Q. They are distilled, are they?

A. They are volatile oils, not all obtained by distillation; some are and some are not. But they are volatile oils just the same. Oil of almonds may be an expressed oil, obtained by expression—as you say, an expressed oil, which is the fixed oil of almond. The same almond, after having the oil taken out of it, is put into a still with water, and then distilled, and the distillate is a distilled

oil. That is the volatile oil of almonds. The two oils, the fixed oil of almonds and the volatile oil of almonds, are as distinct as you can imagine, and yet they are both contained in almonds. There is the first idea. The name "oil" is applied to flavoring substances, those which give the flavor or odor of vegetable substances; the term "oil" is commonly applied to them, but it is an inappropriate term, and so regarded, I think, by every chemist.

Q. Then your idea of what oil includes is more an arbitrary distinction than anything else, is it not?

A. I do not quite catch your point, but I can say that the way in which we use the term is very arbitrary.

Q. That is, you are referring to your retail trade as chemist?

A. No, sir, I mean the common language of the people. The term "oil" is arbitrarily used. Oil of vitriol, for instance, is a purely arbitrary term.

Q. You differ, then, with every witness who has been summoned in this case, upon the question of whether or not the substance in controversy here is called an oil.

A. Yes, sir, I do to that extent, to the extent they have spoken of light oils, using the factory name. The name "light oil" is mainly applied to naphtha and benzole. They are not oils.

Q. They are not oils?

A. No, sir. You cannot find any chemical authority who will admit that benzole is an oil.

Q. Then you would say that no product of coal tar is an oil? That there could not be an oil produced from coal tar?

A. I do not say that, because we can produce thousands of things from coal tar, and that would be saying more than I am competent to say.

Q. We will say, then, in the four or five main divisions,

the four or five main fractional distillations, without going into the refined product.

A. In those divisions, no product known as an oil could be obtained.

Mr. LAKE.—Q. Do you mean no product known as an oil, or according to your understanding of the term "oil"?

A. According to my understanding of the term "oil," I do not know of any oil that exists in that bottle.

Q. Or in any other bottle here?

A. Or in any other of the bottles, according to my understanding of the term "oil." I do not look upon creosote as an oil. It is a phenol, and a phenol is not an oil.

The further taking of depositions herein was, by consent of counsel, continued and adjourned until 2 o'clock. P. M.

Afternoon Session.

Met pursuant to adjournment, at two o'clock P. M. There were present the referee and the respective counsel, and further proceedings in the matter of taking said depositions were thereupon had as follows:

JOHN D. ISAACS, recalled for the appellant and petitioner.

Mr. LAKE.—Q. Mr. Isaacs, what is your profession?

A. I am a civil engineer.

Q. In the employ of what company?

A. In the employ of the Southern Pacific Company.

Q. I show you two bottles, marked respectively "Petitioner's Exhibit A," and "Petitioner's Exhibit B," and I ask you what they are, if you know?

A. (After examination.) They are creosote.

Q. Will you state what familiarity you have, if any, with the contents of those two bottles?

A. I have made analysis from each of them.

Q. You state that you are in the employ of the Southern Pacific Company. Among other things, have you any familiarity with this creosote which you have mentioned? A. I have.

Q. State what that is.

A. I have had occasion to make numerous analyses of it, and to use it right along in the preservation of timber.

Q. In your duties as an employee of the Southern Pacific Company, state what familiarity you have with creosote, and with the creosote which is the subject of this litigation.

Q. What do you mean by O. K.-ing.

A. I have been charge of the Southern Pacific Company's creosoting plants. Then, too, I have found it necessary to familiarize myself with the materials used for wood preservation, and in doing so, I have studied up pretty thoroughly the question of the manufacture and nature and constituents of creosote, and have investigated it and learned to analyze it, and have analyzed a great many samples. In fact, all samples of creosote imported or bought are submitted to me for analysis before settlement of the bills. The invoices also come to me for O. K.-ing.

A. When the creosote is bought, the shipper sends an invoice stating how many casks there are, and what the quality of the goods is. When I receive the invoice, I examine the creosote, and I either certify that it is suitable material for our purposes, or decline to receive it, or turn the thing back to the purchasing jobber, who makes an adjustment of the matter.

Q. What enables you to so certify those bills?

A. The analysis of the material, and the certificate of weights as to the amount received.

Q. What study have you given to the subject of creosote? A. I have given a good deal of study to it.

Q. During what period?

A. Since 1889, and more especially since 1891.

Q. I will show you "Petitioner's Exhibit A" and "Petitioner's Exhibit B," and will ask you if you made an analysis of those two bottles A. I did.

Q. I show you this paper, which I will mark "E" for identification, and ask you what that is.

A. This is an analysis of sample marked "Petitioner's Exhibit A," which analysis was made by me.

Q. I show you now another paper, which I will mark for identification "F," and ask you what that is.

A. That is an analysis of sample marked "Petitioner's Exhibit B," also made by me.

Q. Will you please state from your knowledge of the substance contained in these two bottles referred to by you, and also from your experience with this substance in the abstract, where these two substances came from which are contained in these two bottles, and what the substance is.

A. Do you mean what country they came from?

Q. No, where they came from—where you obtained them.

A. This sample was handed to me by yourself, Mr. Lake; that is "Petitioner's Exhibit A." The other sample, "Petitioner's Exhibit B," I had taken by my foreman at the Oakland works from what we know as Tank No. 2. That has already been brought out in my testimony.

Q. Is there any difference between those two substances?

A. Not in kind, but in the relative proportion of constituents there is a difference.

Q. In the relative proportion of the constituents there

is a difference, but in kind they are the same substance. Is that it? A. They are the same substance.

Q. Referring now to the analysis marked "E," will you state from that analysis what this substance contains?

Mr. KNIGHT.—You refer, Mr. Lake, to the substance in the bottle marked "Petitioner's Exhibit A"?

Mr. LAKE.—Yes.

A. This substance, of which I took a part, first warming it and shaking it so as to make sure to get an average, I found to contain no water and no ammonia. I found that it was completely liquid below 60 degrees Fahrenheit. I did not freeze it, to see how far it would remain liquid. Its specific gravity, at 15 degrees centigrade, was 1.06. The distillation of it showed it to contain tar acids by volume 9.4 qer cent; naphthalene, 15.2 per cent; and residuum left after the distillation had been carried up to 600 degrees Fahrenheit, 28 per cent. Liquid solvents of the solid constituents distilling between 200 and 400 degrees Fahrenheit, were 4.5 per cent; and between 400 and 600 degrees Fahrenheit, 42.9 per cent.

Q. Liquid solvents 4.5 per cent—between what degrees was that percentage obtained?

A. From 200 to 400 degrees, 4.5 per cent. And from 400 to 600 degrees Fahrenheit, 42.9 per cent.

Q. What did you say the 9.4 per cent was?

A. Crude tar acids—phenols.

Q. Phenols? A. Yes, sir, phenols.

Q. And what was the 15.2 per cent?

A. Solid crystalline naphthalene.

Q. And what was the 28 per cent?

A. That was residuum, consisting of a mixture of anthracene and pitch.

Q. What is the consistency of that residuum at ordinary temperature, Mr. Isaacs?

A. It is about like tallow in cold weather. It is in form a solid, greasy substance.

Q. Take it in an ordinary temperature?

A. At an ordinary temperature, yes, sir.

Q. What temperature would it take to dissolve it?

A. To melt it? A. Yes.

A. Well, I suppose it would remain fluid down to about 300 degrees Fahrenheit.

Q. Three hundred degrees Fahrenheit.

A. Yes, sir, or above 200 degrees, anyhow. I have never tried it, but I know that is about it.

Q. Below 200 degrees Fahrenheit, it would be solid?

A. Yes, sir.

Q. What is the naphthalene which you have mentioned?

A. A white crystalline substance with a disagreeable smell.

Q. And the phenols, what are they?

A. The tar acids. They hold about the same relation to the benzine series that the alcohols do to the simpler hydrocarbons—the Professor can correct me, if I am wrong technically. They are true acids, in the sense that they combine with bases.

Q. What are the liquid solvents that you have mentioned?

A. They are pure hydrocarbons.

Q. Now, look at the analysis which has been marked "F," and state what that is an analysis of.

A. That is an analysis of the sample "Petitioner's Exhibit B."

Q. And what proportion of phenols is there in "Petitioner's Exhibit B"? A. 7.5 per cent.

Q. And of naphthalene? A. 32.8 per cent.

Q. And of residuum? A. 16 per cent.

Q. And of liquid solvents?

A. Those from 200 to 400 degrees Fahrenheit, 4 per cent; and from 400 degrees to 600 degrees, 39.7 per cent.

Q. Then the bottle marked "Petitioner's Exhibit A," as I understand it, contains 52.6 per cent of phenols, naphthalene, and residuum, and 47.4 per cent of liquid solvents—am I right in that?

A. That is correct.

Q. And "Petitioner's Exhibit B" contains 56.3 per cent of phenols, naphthalene, and residuum, and 43.7 per cent of liquid solvents—is that true?

A. That is correct.

Q. I will show you a bottle marked "Petitioner's Exhibit C," and also an analysis marked "Petitioner's Exhibit D," made by Professor Price, and ask you under what circumstances and how the contents of that bottle were obtained, if you know, and also an explanation of the exhibit.

A. I instructed our resident engineer to send to you, Mr. Lake, a sample taken in the same way—I think the wording of my communication to the engineer was "a fair, average sample," if I remember rightly, of the same invoice of creosote all that from which "Petitioner's Exhibit B" was taken; and from the signature on this bottle, and the way it is labeled, I suppose that is intended to represent it.

Q. Does that so represent a fair average sample of it?

A. I do not think it does, no.

Q. You do not think it does?

A. No, sir

Q. Do the two exhibits marked "Petitioner's Exhibit

A" and "Petitioner's Exhibit B" show a fair average sample of the creosote imported?

A. Well, the sample "Petitioner's Exhibit B" I know was taken in the way that we usually take what we call a fair average sample, that is a sample from which we would pay for the goods. This sample "Petitioner's Exhibit A" I know nothing about. I do not know how it was taken. This material generally comes either in casks or partly in casks and partly in the water ballast in the ships; that is ships which are supplied with tanks use the tanks for water ballast when they have no fluids to transport, when they have fluids, they generally draw off from the supply of creosote at the company's warehouse the more easily pumped and fluid portions, and place it in the water ballast, and the other portion is afterwards melted by steam and pumped hot into casks, because there are no steam coils in the ballast tanks on the ships; and we have to import the solid substance in casks, while the more fluid substance is pumped out. Therefore, in getting our samples, we never take a sample like those (referring to "Petitioner's Exhibit A" and "Petitioner's Exhibit C") but we take the whole invoice and put it into our storage tanks (we have eight of them at Oakland, six 50,000 gallon tanks and two 30,000 gallon tanks)—put it into one or more of these tanks and heat it, and have it stirred up thoroughly with paddles. And then, as a further precaution, in order to get an average sample, because it is money to use in paying for it, we take samples from three different heights in the tanks, as I have already explained. I know that this bottle "Petitioner's Exhibit B," was one of the bottles that came from the center of the tank. We take a stick, and put it down into the creosote, and the height of the creosote is marked. Then we take three bottles, and lash

one a foot below the top, one a foot from the bottom, and one in the middle of the height of the creosote. Then we tie a string to each cork, and sink the empty bottles into the creosote and pull the strings simultaneously. In that way we think we will get an average.

Q. And the creosote is heated at that time?

A. Yes, sir, and is kept heated and stirred up all during the time of taking the samples. In making analysis, when I have plenty of time I generally analyze each of three bottles separately, but if I have not the time, I mix together portions from each of the three bottles.

Q. What is the consistency of this substance at ordinary temperature, taking an average sample?

A. Our specifications require that it shall be completely liquid at 100 degrees Fahrenheit, and that there shall be no deposit below 90 degrees Fahrenheit. But below that we pay no attention to its actual state. We have found, however, by experience, that creosote which conforms with our specifications—that is, that it shall contain not less than 25 per cent of residuum above 600 degrees Fahrenheit, not less than 20 per cent naphthalene, and about 8 per cent tar acids—that creosote of that description is invariably solid up to about 70 degrees Fahrenheit always solid at 60 degrees, as solid as that is—I imagine this room is somewhat warmer than 60 degrees now.

Q. So it is a semi-hard mass?

A. Yes, sir; we cannot pump it or handle it without warming it. That is the reason why we limit the temperature at which it shall be fluid at 100 degrees, in order that we may be enabled to pump it from these various tanks in the yard.

Q. Do you know the process, Mr. Isaacs, by which this creosote is obtained?

A. It is obtained by the fractional distillation of coal tar.

Q. Do you know whether or not this substance is always produced by simple distillation?

A. Generally it is not produced by the first simple distillation.

Q. State how it is done.

A. Professor Price testified that the nature and constituents of this creosote depended largely upon the kind of coal and the temperatures and the process by which the creosote was formed. Now, our specifications require a certain relative proportion within the limits between these constituents. As a rule the normal creosoteas it is called, so far as I have noticed or observed, rarely has exactly those proportions or anywhere near them. There is sometimes, as in the creosote made by the Pacific Roofing and Refining Company here in San Francisco, a large excess of tar acids. Of course if we were to purchase that creosote, it merely means that a certain portion of it, representing an excess of tar acids, would be thrown away, useless to us in our work. That is really the reason why we have specifications. We want to keep it at about what experience and a large number of observations and records, have taught us; also what we have gained from eastern roads and the English railroad men and the French, and others. It has been pretty generally settled among men who preserve timber that the proper relative proportions are about what our specifications call for.

Q. And what are those relative proportions?

A. I have already given them. Not less than 25 per cent of heavy residuum, not less than 20 per cent of naphthalene, about 8 per cent of tar acids, and the rest fluid solvents.

Q. What do you mean by "fluid solvents"?

A. I mean what Professor Price calls the basic oils. They are certain hydrocarbons; as well as I have been able to learn, they are pretty pure hydrocarbons—fluid at ordinary temperatures. We could use other solvents for the purpose. Those fluid hydrocarbons are really, so far as I know, of no use to us in the process of creosoting. They are simply media or means of enabling us to handle these denser and more solid substances. Probably it would be as well if I were to explain the mechanical theory of creosoting, to show you why we have arrived at this particular specification.

Q. I do not know that that is material. I think you went into that this morning.

Mr. KNIGHT.—Yes, we went into the application of the creosote to the timber.

The WITNESS.—I should like to say, though, what the use of the different portions of the creosote are.

Mr. LAKE.—Q. Very well. Go on.

A. After drying the timber, as Mr. Knight has already brought out, we have then timber in a state of complete desiccation—the moisture is driven off, the germs are killed, what albuminous substances there are in the sap are partially coagulated like a partially boiled egg, and we are then ready to proceed with the process of rendering the timber proof against either external attacks or internal decay. The part that these different constituents play is this: During this process of injection of these oils, there is a certain mechanical filtration that takes place. The oil has to go through the pores, through these fine cells in the wood, from the outside. The denser residuum remains near the surface. The naphthalene in its liquid state penetrates still further. The tar acids go farther than either. Now, if the tar

acids alone were injected and would stay there, that would be all we would need. They would preserve the timber. But, unfortunately, they are volatile. They have done the work, they have finished the germicidal part of their mission. But they evaporate, and therefore you must have something that is more permanent as an antiseptic to remain in the wood and continue the good work which the tar acids have begun. It has been claimed by some that the tar acids are of no use, because upon an analysis of preserved timber later on, no tar acids were found. But that is not a fact. The tar acids have really done their work by completely killing off the germs in the sap of the wood, the albuminous constituents of it. The naphthalene is more permanent as an antiseptic than the tar acids. It remains in a sort of mat, tangled in the fibres of the wood. Naphthalene by itself is quite volatile, and if exposed to the air, as Dr. Tidy demonstrated in his experiments, would evaporate and leave the wood entirely for a certain definite distance down—he estimated it at about an eighth of an inch below the surface of the timber. When it evaporates to that extent, the timber begins to rot from the outside, especially where it is in contact with the ground, close to the surface. Bugs and animals attack it, and that leaves the naphthalene again exposed to the air, and it again evaporates, and decay again sets in until another portion of the outside comes off. So it is merely a series of attacks from the outside. To prevent that effect, we require about 25 percent of residuum in the creosote. That residuum envelopes the entire timber, remains near the outside by filtration, and prevents the vaporization of the naphthalene as well as furnishing a mechanical resistant against external attacks.

Mr. KNIGHT.—Q. It makes a kind of coat?

A. A kind of coat, yes, that is what it is. Any coating is good for marine animals that is pitchy and hard to attack. Asphalt is very good. But that does not preserve from internal decay—dry rot or internal rot it may be called.

Mr. LAKE.—Q. Mr. Isaacs, is this creosote, this substance to which you have testified, according to the specifications which you have mentioned, among the first distillates of coal tar, or has it passed through other processes to arrive at the specifications mentioned by you?

A. Usually the creosote, as manufactured, does not come up to our specifications, and it has to be treated so as to bring it up to meet our specifications.

Q. Treated in what way?

A. For instance, if there is an excess of tar acids, they are removed from it by treatment with caustic soda or lime.

Q. A chemical?

A. Yes, sir. An analysis is first made showing the excess of tar acids, and then the equivalent of caustic soda is put in and the mass is agitated, and an aqueous solution of phenate of soda forms, which settles to the bottom and is drawn off, leaving the creosote with the proper percentage of tar acids.

Mr. KNIGHT.—Q. Was that the process with the substance in question?

A. That is the usual process.

Mr. LAKE.—Q. You do not know whether this happened with the substance which is the subject of this controversy?

A. I do not know whether it happened or not, no, sir.

Q. It may have been subjected to that process?

A. It may have been. Generally it passes through some such process.

Q. Some mechanical process to arrive at this condition?

A. Yes, sir. Normally you cannot depend upon its having the constituents in the proper proportion. If it has too little residuum, they put some pitch back. If it has too much naphthalene, the quantity of that is reduced.

Mr. KNIGHT.—Q. But you can, by regulating the temperature, obtain any particular fraction?

A. By regulating the temperature, you can obtain any fraction that you want to which enters into this substance but you cannot obtain any particular combination that you want to.

Mr. LAKE.—I understand you that according to your specifications which you require to be filled in purchasing this substance, this substance may have been passed through a process of chemical combination to take out something, or something might have been put back or into it. Is that true?

Mr. KNIGHT.—I object to that question, upon the ground that the matter to be decided here is not what may have been done, but what has been done.

Mr. LAKE.—Q. You have known that to be done with this substance

A. Yes, sir.

Q. What is this substance?

A. Creosote.

Q. How would you describe it, from your knowledge of the substance? What would you call it?

A. I would call it a mixture of the products of coal tar, distilling at about from 300 degrees to 800 degrees Fahrenheit.

Q. Mr. Isaacs, when you put coal tar into a retort and apply heat to it, is there any product of that coal

tar which comes over which is not called an oil?

A. Sometimes there is water, and sometimes there is ammonia.

Q. Are they not all called oils, light oils and heavy oils?

A. Yes, sir, they are. The first distillation is called a light oil; the next distillation is called a middle oil; the third distillation is called a heavy oil, and the last distillation is called an anthracene oil.

Q. And then there is a residuum called pitch?

A. Yes, sir.

Q. There is not a single product, then, of the distillation of coal tar that is not called oil?

A. The names I have given are the workmen's names. They say, "Here is a light oil; here is a middle oil; here is a heavy oil; and here is an anthracene oil."

Q. What is the shop name for light oils? That is to say, what is the real name for what they call light oils in the shop? That is what I meant to ask.

A. The light oil is a mixture of benzole and naphtha.

Q. By the application of heat to coal tar, could you not, carefully noticing the thermometer, cut off a pure naphtha or a pure benzole?

A. Not absolutely pure, no, sir.

Q. What percentage do you think there would be of one in the other? Or, first, could you not cut off a combination of benzole and naphtha?

A. Yes, sir, with a small amount of the middle amounts and a less amount of heavy oils, and a trace of the anthracenes.

Q. And so following all the way through?

A. Of those which are the nearest to any one of them, that one will have the most of, while of those which are the farthest from it, it will have the least.

Q. There would be a very light percentage of the other oils in the light oils, would there not?

A. Yes, sir. You would call it somewhere about 50 per cent benzole, 25 per cent or 30 per cent of naphtha, and say 7 per cent or 8 per cent of the middle oils, and 1 per cent or 2 per cent of the heavy oils, and a trace of the anthracene oil, the oil farthest away.

Q. And could you not follow right straight through in the distillation, and obtain the same results with all of the oils, by carefully watching the thermometer?

A. Yes, sir, by selecting your temperatures you can, within certain ranges, get a fairly pure distillate in any fraction that you want. But each fraction always has more or less of the others, a trace of those are farthest away, and more and more of the others as you get nearer.

Mr. LAKE.—We now offer in evidence the analysis of the contents of "Petitioner's Exhibit A," which has been identified by the witness and marked "E" for identification, and ask that it be marked "Petitioner's Exhibit E"; and also offer in evidence the analysis of "Petitioner's Exhibit B," which has been identified by the witness and marked "F" for identification, and ask that it be marked "Petitioner's Exhibit F."

(The analyses so offered in evidence on the part of the petitioner were here marked respectively as asked by counsel.)

Cross-Examination.

Mr. KNIGHT.—Q. What is the specific gravity of the material in the bottle marked "Petitioner's Exhibit B," Mr. Isaacs? Do you know?

A. I have it here, Mr. Knight. (Refers to "Petitioner's Exhibit F.") It is 1.032.

Q. What is the specific gravity of the material in the bottle marked "Petitioner's Exhibit C"?

A. (After reference.) 1.06.

Mr. LAKE.—Q. In "Petitioner's Exhibit C"? Do you mean that?

A. Oh, I do not know as to that; I did not analyze that.

Mr. LAKE.—According to Professor Price's analysis, the specific gravity of the contents of "Petitioner's Exhibit C" is 1.044. Exhibit "C" was analyzed by Professor Price.

Mr. KNIGHT.—Q. As I understand it, Mr. Isaacs, so far as the samples furnished by the petitioner are concerned, we have nothing taken from the top or bottom of the tanks?

A. No, sir, unless this was taken from the top (referring to "Petitioner's Exhibit A"); I do not know that that was taken from the top, but I should imagine that it was taken from either the top or from one of the casks that had only the fluid in it.

Q. Referring now to the bottle marked "Petitioner's Exhibit B," is that of about the consistency now that it was when it was first taken?

A. No, sir, when it was first taken, it was hot.

Q. Hot, and therefore more liquid?

A. Yes, sir.

Q. Do you know how much warmer it was when it was taken than it is now?

A. Well, if it was in accordance with our specifications, it was at about 100 degrees.

Q. One hundred degrees when it was taken?

A. Yes, sir.

Q. You have distilled this substance yourself, have you not, Mr. Isaacs? A. Yes, sir.

Q. And you have obtained a product of water and ammonia as the first result of the distillation?

A. Occasionally traces of water and ammonia. I do not think I have obtained above 1½ per cent.

Q. You would not call either of those substances an oil, would you?

A. Water or ammonia?

Q. Water or ammonia.

A. Not by themselves, no, except as the whole distillation is called an oil.

Q. They really form an inconsiderable part of the distillate such as you made?

A. Yes, sir, as a rule.

Mr. LAKE.—That is the case for the petitioner.

Testimony for Respondent.

C. A. KERN, called for the respondent, being duly sworn, testified as follows:

Mr. KNIGHT.—Q. Dr. Kern, you are the Government chemist, are you not?

A. Yes, sir.

Q. At this Port?

A. Yes, sir.

Q. And have been for how long?

A. Since November 10, 1893.

Q. You are a chemist by profession?

A. Yes, sir.

Q. And have been for how long?

A. Since 1878.

Q. Have you examined or made a distillation of any of the preparations that are before you?

A. Yes, sir, I have, of these two.

Q. "Respondent's Exhibit 1" and "Respondent's Exhibit 2"?

A. Yes, sir.

Q. You have subjected those to distillation, have you?

A. Yes, sir.

Q. Can you now tell me what the result of that distillation was?

A. Yes, sir.

Q. Do you recognize this paper?

A. Yes, sir.

Q. What is that, Doctor?

A. That shows the result of the distillation. Water one cubic centimeter—

Q. (Interrupting.) How did you get that, Doctor? Was that the result of the distillation of any part of "Respondent's Exhibit 2"?

A. A part of this one; I think it is Exhibit 2.

Q. That is "Respondent's Exhibit 2," yes. Do I understand that you took one cubic centimeter?

A. I took 100 cubic centimeters and put it through fractional distillation.

Q. And that is the result?

A. Yes, sir.

Mr. Knight.—I offer in evidence the analysis produced by the witness of "Respondent's Exhibit 2," and ask that the same be marked "Respondent's Exhibit 3."

(The analysis so offered was here marked "Respondent's Exhibit 3.")

Q. You may state what the result of that distillation was.

A. One cubic centimeter of water and ammonia—

Q. (Interrupting.) Have you any memorandum which will show you the degree of heat to which you subjected that substance?

A. I distilled it—

Q. (Interrupting.) What are you reading from now?

A. I distilled it up to 316 to 320 degrees Fahrenheit,

and I got one cubic centimeter of water and ammonia, and 2½ cubic centimeters of benzole, xylol, and numerous combinations.

Q. You say you got 2½ cubic centimeters of benzole and xylol?

A. Yes, sir, benzole and xylol, and all the other combinations—you can never find the end of those combinations.

Q. Then what?

A. Then I distilled it up to 360 to 370 degrees Fahrenheit, and I got 7½ cubic centimeters of what you call light oils, containing carbolic acid and tar acids, etc; that is, oils which are lighter than water.

Q. Those are what are called light oils?

A. Yes, sir.

Q. Whose specific gravity is lighter than water?

A. Yes, sir. And then I distilled further, and got the heavier oils, oils heavier than water, 46 cubic centimeters, containing some of the tar acids and naphthalene. Then you get still heavier oils, called anthracene oils, 17½ cubic centimeters. Then you get 25½ cubic centimeters of what are still heavier oils, and pitch, residuum.

Q. How high did you go in your distillation?

A. My thermometer did not reach the end of it; at any rate, up to 700 or 800 degrees, I think.

Q. How high did it accurately register—do you know?

A. About 600 degrees.

Q. Did you make any analysis by distillation of the subject that is marked "Petitioner's Exhibit B"?

A. I don't remember that. I don't know. I have made several of them. I made at least ten or twelve or fourteen analyses.

Q. Have you the results of those here?

A. No, sir, I have not.

Q. Where did you get "Respondent's Exhibit 2"?

A. It was delivered to the appraiser.

Q. Do you know whether that was delivered to you as a sample of this merchandise in controversy?

A. This is the official sample, delivered to me for investigation.

Q. Is the substance contained in the bottles before you known as a distilled oil, or not?

A. It is distilled oil.

Mr. LAKE.—That I object to as not being responsive to the question.

Mr. KNIGHT.—Q. Technically, Doctor, you can answer that question by yes or no.

A. Yes, sir.

Q. Is it known as a distilled oil?

A. It is known as a distilled oil.

Q. And was so known on the 28th of August, 1894?

A. Yes, sir.

Q. There has been no change in the same?

A. No, sir.

Q. It is also a preparation or product of coal tar, is it not?

A. Yes, sir, it is a product of coal tar.

Q. Do you know whether either of those terms is merely used in referring to the substance, or is the substance designated by a specific name?

A. It is merely known as a creosote oil.

Q. That is, as I understand you, it would not be sold in the market either as a distilled oil or as a preparation of coal tar?

A. No, sir.

Q. How are colors and dyes made?

A. Colors and dyes are made from some of the products of the coal tar. For instance, aniline is made from the product benzole; some others are made from naphthalene; and so on.

Q. And all those are the products of chemical processes?

A. They are prepared by chemical processes.

Mr. LAKE.—Q. Colors and dyes, you say?

A. Yes, sir. Those products, or the foundations of those dyes, are taken and, as we call it, manipulated. They are used in combination with chlorine or sulphuric or nitric acid, and so on—there are endless processes, and it is difficult to specify.

Q. Are they produced by distillation, or treating with acids?

A. They are treated with acids and bases, according to the process.

Q. These colors and dyes are derived from the various by-products of these distillations, are they not?

A. Yes, sir.

Mr. LAKE.—That is a trifle leading.

Mr. KNIGHT.—Q. I want to ask you, Doctor, whether you know what mineral oils are.

A. Mineral oils are hydrocarbons.

Q. How is a mineral oil obtained, and from what?

A. Mineral oil is obtained by distillation.

Q. From what?

A. From crude products.

Q. Of what?

A. Well, crude petroleum is a mineral oil.

Q. To what extent are those liquid, and at what temperature—mineral oils?

A. It depends upon the percentage of pitch, whether it is liquid or solid; or the percentage of paraffine.

Q. Pitch and paraffine are contained in these oils, are they?

A. In the crude oils, yes; not in the tar oils; paraffine is not in tar oils, no; it is only in petroleum oils.

Q. Does paraffine become a solid?

A. Yes, sir.

Q. And at what temperature—do you know?

A. Solid at ordinary temperature. It melts at about 20 or 25 Celsius, I think—we use Celsius more in chemistry than Fahrenheit.

Q. Your first product from this distillation was water, was it not?

A. Water, yes, sir.

Q. Then did you get some ammonia after that?

A. Some traces of ammonia dissolved in water, yes.

Cross-Examination.

Mr. DE HAVEN.—Q. Then you say, Doctor, that this substance is in fact a product of coal tar?

A. Yes, sir, it is a product of coal tar.

Q. And it would not be improper to describe it as such, speaking of it generally—to say that this substance in controversy is a product of coal tar?

A. This is a product of coal tar, yes.

Mr. LAKE.—Q. Why do you say it is a distilled oil?

A. On account of its being obtained by distillation.

Q. On account of its being obtained by distillation?

A. Yes, sir.

Q. You say it is known as a distilled oil because it is obtained by distillation. Is that the only reason you can give?

A. Yes, sir.

Q. That is the only reason you have?

A. It is known in the market as that.

Q. It is known in the market as a distilled oil?

A. As a creosote oil.

Q. As a distilled oil?

A. It is obtained by distillation.

Q. It is known in the market as creosote oil or dead oil, is it not?

A. Yes, sir.

Q. Is it known in the market as a distilled oil?

A. Well, no, I guess not.

Q. Is there any substance in the market known as a distilled oil? You say you are a chemist. You are familiar with pharmacy, are you not?

A. Yes, sir.

Q. Is there any oil in the market known as a distilled oil?

A. Yes, sir.

Q. Known commercially as a distilled oil?

A. Not by name as a distilled oil, but it is a distilled oil.

Q. Do you know anything about the United States Dispensary?

A. Yes, sir.

Q. Is that an approved authority?

A. That is an approved authority, yes.

Mr. KNIGHT.—What edition have you there?

Mr. LAKE.—The edition of 1883.

Mr. KNIGHT.—There are some recent good additions to that.

Mr. LAKE.—Q. I refer you to page 982 of the United States Dispensatory, Doctor.

A. "Volatile oils, distilled oils—those are sometimes called distilled oils."

Q. Go on, Doctor.

A. (Continuing.) "From the mode in which they are

usually procured; sometimes essential oils, from the circumstance that they possess, in a concentrated state, the properties of the plants from which they are derived." Is that all you want?

Mr. LAKE.—You have been reading from page 982 of the United States Dispensatory, the edition of 1883?

Mr. KNIGHT.—Does that specify whether distilled oils are known in the importing trade as such?

Mr. LAKE.—I am simply stating, Mr. Knight, that there are oils known as distilled oils to the trade, and in the United States Dispensatory, which I have here.

Mr. KNIGHT.—I object to the testimony unless it is shown that it is a term used in the importing trade.

Mr. LAKE.—I will read what is stated here and have it go into the record.

Mr. KNIGHT.—Certainly, over my objection.

Mr. LAKE.—I will continue reading from the point where the witness left off. "They exist in all odoriferous vegetables, sometimes pervading the plant, sometimes confined to a single part; in some instances contained in distinct cellules, and preserved after desiccation, in others formed upon the surface, as in many flowers, and exhaled as soon as formed. Occasionally, two or more are found in different parts of the same plant. Thus, the orange tree produces one oil in its leaves, another in its flowers, and a third in the rind of its fruit. In a few instances, when existing in distinct cellules, they may be obtained by pressure, as from the rind of the lemon and orange; but they are generally procured by distillation with water. Some volatile oils, as those of bitter almonds and mustard, are formed, during the process of distillation, out of substances of a different nature pre-existing in the plant."

Q. I simply call your attention to that extract of the

United States Dispensatory, edition of 1883, and I will ask you, Dr. Kern, whether, refreshing your memory from that extract, there are oils known as distilled oils?

A. If you went into a drugstore and asked for distilled oil, they would not know what to give you.

Q. They would not know what to give you?

A. No, sir.

Q. From what college did you graduate, Doctor?

A. From the University in Wurtemberg, Germany.

Q. How long ago?

A. In 1878.

Q. What familiarity have you with this substance here?

A. I worked in a tar distillery as a chemist.

Q. You worked in a tar distillery as a chemist, you say?

A. Yes, sir. And I have made analyses here of coal tar, in 1883, I think it was, for the San Francisco Gaslight Company.

Q. Let me look at that analysis of yours, will you please, Doctor?

A. Yes, sir. (Hands to counsel.)

Q. Then you say that in this analysis which you made of the substance in question, there is but one cubic centimeter of water?

A. Yes, sir.

Q. And two and a half cubic centimeters of benzole?

A. Of benzole, xylol, etc., etc.

Q. Do you not know, as a fact, that all of these substances when you begin to distill coal tar are known as oils?

A. I do not understand that.

Q. Do you not know that the products of coal tar, when you apply heat to coal tar and have begun to dis-

till, are all called oils—such as benzole, naphtha, naphthalene, and carbolic acid, and so on?

A. They are distilled oils.

Q. Are they not known as oils—light oils and middle oils?

A. Yes, sir, they are known as oils.

Mr. KNIGHT.—That is all the testimony we have to offer.

Mr. LAKE.—That is all on the part of the petitioner.

Petitioner's Exhibit D.

Thomas Price & Son, Analytical and Consulting Chemists, 524 Sacramento Street.

San Francisco, Cala., Jany. 28th, 1897.

Fred B. Lake, Esq.

Dear Sir: We have made a careful chemical analysis of a sealed sample of creosote, marked "Creosote Sample, Center No. 1 Tank, Nov. 26, 1896," and beg to report as follows:

The specific gravity we find to be 1.044, and the material is fluid at 78 degrees Fahrenheit. Its composition we find to be as follows:

Water..... .... none
Distillate from 100 to 200 degs., F. none.
Distillate between 200 and 400 degs., F., 5.20 cu. centims.
Distillate between 400 and 600 degs. F.,74.80 cu. centims.
Residue remaining at temperature above
600 degrees F., ...20.00 cu. centims.

The material contains, tar acids, 8.75%; naphthalene, 9.30%.

Yours truly,
THOMAS PRICE & SON.

Petitioner's Exhibit "E."

Creosote Analysis.

West Oakland, Cal., Dec. 24th, 1896.

50 c. c. taken from bottle marked:
" Invoice 3652 Ex. R. R. marked:
" 2200 casks marked:
" Liquid Creosote marked:
" Mar. 22, 1895, marked:

Completely liquid below 60 degrees F.
Specific gravity at 15 degrees C., 1.06

	% by Volume.
Water ....none.	
Ammonia .... none.	
Distillate below 200 degrees F., none.	
" 200 to 400 degrees F., 2.25 c. c.	A.5
" 400 to 600 degrees F., 21.45 c. c.	A.2.9
Tar acids..... ....A.70 c. c.	9.4
Naphthalene .... 7.60 c. c.	15.2
Residuum over 600 degrees F 14.00	28.0
50	100.

JOHN D. ISAACS.

To Mr. F. B. Lake.
12-28-96

Petitioner's Exhibit "F."

Creosote Analysis.

West Oakland, Dec. 24, 1896.

100 c. c. taken from bottle marked.
" sample of creosote marked:
" center No. 2 Tank marked:
" Nov. 26th, 1896, marked:
" sample produced Dec. 21st, 1896, J. K., marked:

Completely liquid at 80 degrees F.
Specific gravity at 25 degrees C., 1.032
Water ....none.
Ammonia ....none.
Distillate below 200 degrees F., none.
" 200 to 400 degrees F., A. c.c.
" 400 to 600 degrees F., 39.7 "
Tar acids .... 7.5 "
Naphthalene .... 32.8 "
Residuum over 600 degrees F. 16. "

100. "

JOHN D. ISAACS.

To Mr. F. B. LAKE.
12-28-96.

Respondent's Exhibit 3.

No. 18. Treasury Department.

1 c. c. Water.
2½ c. c. Benzole, xylol, etc. (lighter than water).
7½ c. c. Light oils, carbolic acid (heavier than water).
46 c. c. Heavy oils (carbolic acid, naphthalene, etc.).
17½ c. c. Heavy oils.
25½. Anthracene oil, pitch, etc.

In the Circuit Court of the United States, Ninth Circuit, Northern District of California.

In the Matter of the Application of the SOUTHERN PACIFIC CO., for a Review of the Decision of the United States General Appraisers, Relative to Classification of Certain "Creosote" Merchandise Imported by said Southern Pacific Company.

United States of America,
Northern District of California,
City and County of San Francisco. } ss.

I, F. N. Shurtleff, the referee appointed by the Circuit Court of the United States, Ninth Circuit, and Northern District of California, to take such evidence as might be produced in the above-entitled matter, as well on behalf of the petitioner as the respondent therein, do hereby certify:

That the testimony and proceedings appearing in the foregoing transcript, consisting of ninety-three pages, were taken and had at Room 85, Appraisers' Building, northeast corner of Sansome and Washington streets, in said city and county of San Francisco, and at the time set forth in said transcript, to-wit, the 28th day of January, 1897, between the hours of ten o'clock A. M. and four o'clock P. M. of said day.

That John D. Isaacs, Thomas Price, Harry East Miller, and W. N. Searby were called and examined as witnesses on behalf of the petitioner in said above-entitled matter, and C. A. Kern was called and examined on be-

half of respondent therein; that previous to giving his testimony each of said witnesses was by me duly sworn to tell the truth, the whole truth, and nothing but the truth in said cause.

That said testimony was taken stenographically and put into typewriting by Ernest J. Mott, a skillful stenographer, a disinterested party, by and with the consent and approval of the parties to said above-entitled matter.

That upon the hearing of said matter, as aforesaid,Frederick B. Lake, Esq., and John J. De Haven, Esq., appeared as counsel for the petitioner, and Samuel Knight, Esq., Assistant United States Attorney, appeared as counsel on behalf of respondent.

That accompanying said depositions and forming part thereof are Exhibits A, B, C, D, E, and F introduced on the part of the petitioner, and Exhibits 1, 2, and 3 on the part of the respondent.

That said testimony, so taken, together with said exhibits, I now deliver into the court for which they were taken.

In witness whereof, I have hereunto set my hand this third day of April, in the year one thousand eight hundred and ninety-seven.

F. N. SHURTLEFF,
U. S. General Appraiser, Referee.

Be it further remembered, that on the 27th day of August, 1897, the said matters having been theretofore argued and submitted to the Court for decision and judgment upon the law and facts herein upon due consideration thereof, it was by the Court found, established, and decided in accordance with the findings of fact and conclusions of law and decision made and entered on the said 27th day of August, 1897; and judgment in accordance therewith was thereupon entered herein.

Now, therefore, whereas the foregoing matters hereinbefore particularly set forth appear not of record, to the end that said matters, and all thereof, may be preserved and made of record, respondent and appellant herein, the above-named Collector of Customs, hereby respectfully presents to this Honorable Court the foregoing bill of exceptions, and upon the stipulation hereto attached of counsel for the petitioner and appellee herein prays that the same may be settled and allowed as and for the bill of exceptions in the above-numbered and mentioned case.

JOHN H. WISE,
Collector, etc., Respondent and Appellant.
By SAMUEL KNIGHT,
Asst. United States Attorney.

It is hereby stipulated by and between the parties hereto and their respective counsel that the foregoing bill of exceptions contains a full, true, and correct report and statement of all the testimony and evidence introduced by either side in the above-mentioned and numbered case, and may be settled, allowed, and approved as and for such bill of exceptions.

Dated September 28, 1897.

FRED'K B. LAKE,
Attorney for Importer, Petitioner, and Appellee.
SAMUEL KNIGHT,
Asst. United States Attorney, for Collector Respondent and Appellant.

Order.

The foregoing bill of exceptions in the above case is hereby settled, allowed, and approved and ordered filed nunc pro tunc as of August 27, 1897.

Dated September 28, 1897.

WM. W. MORROW,
Circuit Judge.

[Endorsed]: Bill of exceptions. Filed Sept. 28, 1897, nunc pro tunc as of Aug. 27, 1897. Southard Hoffman, Clerk.

In the Circuit Court of the United States, Ninth Circuit, Northern District of California.

In the Matter of the Application of the SOUTHERN PACIFIC COMPANY for a Review of the Decision of the United States General Appraisers, Relative to the classification of Certain Creosote Imported by said Company. } No. 12,247.

Petition for Appeal.

The respondent in the matter above named, the Collector of the Port of San Francisco, California, appellant herein, considering himself aggrieved by the decision and judgment rendered and entered herein on the 27th day of August, 1897, doth hereby appeal from said decision and judgment to the United States Circuit Court of Appeals for the Ninth Circuit, and upon the authority of the attorney general of the United States, who makes application therefor, prays that this, his appeal, may be allowed, and that a transcript of the record and proceedings and papers upon which said decision and judgment were

made and rendered, duly authenticated, may be sent to said Circuit Court of Appeals.

Dated September 23, 1897.

JOHN H. WISE,
Appellant.
By SAMUEL KNIGHT,
Asst. United States Attorney.

Order.

And now, to-wit, on the 23d day of September, 1897, it is ordered that the said appeal be allowed as prayed for.

WM. W. MORROW,
Circuit Judge.

[Endorsed]: Filed September 23, 1897. Southard Hoffman, Clerk. By W. B. Beaizley, Deputy Clerk.

In the Circuit Court of the United States, Ninth Circuit Northern District of California.

In the Matter of the Application of the SOUTHERN PACIFIC COMPANY, for a Review of the Decision of the United States General Appraisers, Relative to the classification of Certain Creosote Imported by said Company.

Assignment of Errors.

And now, upon this 23d day of September, 1897, comes the respondent and appellant herein, the Collector of the

Port of San Francisco, State and Northern District of California, by the United States Attorney for said district, and says that in the record herein there is manifest error in this, to-wit:

I.

That said Circuit Court erred in finding and deciding that the merchandise involved herein was not at or before the time if its importation into said port, under the late Tariff Act of August 28, 1894, and now is not known chemically, or at all, as a distilled oil.

II.

That said Court erred in not finding and deciding that said merchandise is and was and is and was known chemically and otherwise, as a distilled oil, as well as a product of coal tar.

III.

That said Court erred in not finding and deciding that said merchandise is not, and was not, a preparation of coal tar.

IV.

That said Court erred in holding, adjudging, and deciding that the merchandise in controversy is not, and was not, specially provided for in said act other than as a product of coal tar, not a color or dye.

V.

That said Court erred in not holding, adjudging, and deciding that the said merchandise was specially provid-

ed for in paragraph 60 of said act of August 28, 1894, as a distilled oil, and was dutiable at the rate of twenty-five per centum ad valorem upon its importation.

VI.

That said Court erred in not holding, adjudging, and deciding that said merchandise was not provided for in paragraph 443 of said act of August 28, 1894, and was not under such act free of duty as a product of coal tar.

VII.

That said Court erred in not holding, adjudging, and deciding that products of coal tar were not provided for in said paragraph 443 of said act.

VIII.

That said Court erred in reversing and setting aside the decision of the Board of U. S. General Appraisers herein, and in adjudging that the action of the Collector of said Port herein was erroneous in assessing and liquidating duties on the merchandise in question.

IX.

That said Court erred in holding, adjudging, and deciding that the importer of said merchandise, the said Southern Pacific Company, petitioner in the above-entitled proceeding, was entitled to judgment herein,

X.

That said Court erred in directing the entry of judg-

ment herein in favor of the said Southern Pacific Company.

JOHN H. WISE,
Respondent and Appellant.
By SAMUEL KNIGHT,
Asst. United States Attorney.

[Endorsed]: Filed September 23, 1897. Southard Hoffman, Clerk. By W. B. Beaizley, Deputy Clerk.

At a stated term, to-wit, the July term, A. D. 1897, of the Circuit Court of the United States of America, of the Ninth Judicial Circuit, in and for the Northern District of California held at the courtroom in the city and county of San Francisco, on Thursday, the 23d day of September, in the year of our Lord, one thousand eight hundred and ninety-seven.

Present: The Honorable WILLIAM W. MORROW, Circuit Judge.

In the Matter of the Application of the SOUTHERN PACIFIC COMPANY, for Review of a Decision of the Board of U. S. General Appraisers, Relative to Certain "Creosote." } No. 12,247.

Order Allowing Appeal.

Upon motion of Samuel Knight, Esq., Assistant U. S. Attorney, and upon the filing by him of a petition for order allowing an appeal, together with an assignment of errors herein, it is ordered that an appeal from the judgment and decision entered August 27th, 1897, herein

be, and hereby is, allowed to the United States Circuit Court of Appeals for the Ninth Circuit, and that a certified transcript of the record and proceedings herein be forthwith transmitted to said Court.

At a stated term, to-wit, the July term, A. D. 1897, of the Circuit Court of the United States of America, of the Ninth Judicial Circuit, in and for the Northern District of California, held at the courtroom in the city and county of San Francisco, on Thursday, the 30th day of September, in the year of our Lord, one thousand eight hundred and ninety-seven.

Present: Honorable WILLIAM W. MORROW, Circuit Judge.

In re Application of SOUTHERN PACIFIC COMPANY, for Review of Decision of Board of U. S. General Appraisers, Relative to Certain Creosote. } No. 12,247.

Order Allowing Withdrawal of Exhibits.

On motion of Samuel Knight, Esq., Assistant United States Attorney, it is ordered that the appellant herein be, and hereby is, allowed to withdraw from the files of this court all original exhibits of material in this cause, for the purpose of transmitting the same to the United States Circuit Court of Appeals for the Ninth Circuit, as part of the record upon the appeal herein.

[Endorsed]: Filed Sept. 24, 1897. Southard Hoffman, Clerk. By W. B. Beaizley, Deputy Clerk.

[Endorsed]: No. 408. United States Circuit Court of Appeals for the Ninth Circuit. John H. Wise, as Collector of the Port of San Francisco, State of California, Appellant, vs. Southern Pacific Company, Importer of Certain Creosote, Merchandise, etc., Appellee. Transcript of Record. Upon Appeal from the Circuit Court of the United States, of the Ninth Judicial Circuit, in and for the Northern District of California.

Filed November 20, 1897.

F. D. MONCKTON,

Clerk.